UNIVERSAL MILITARY EDUCATION

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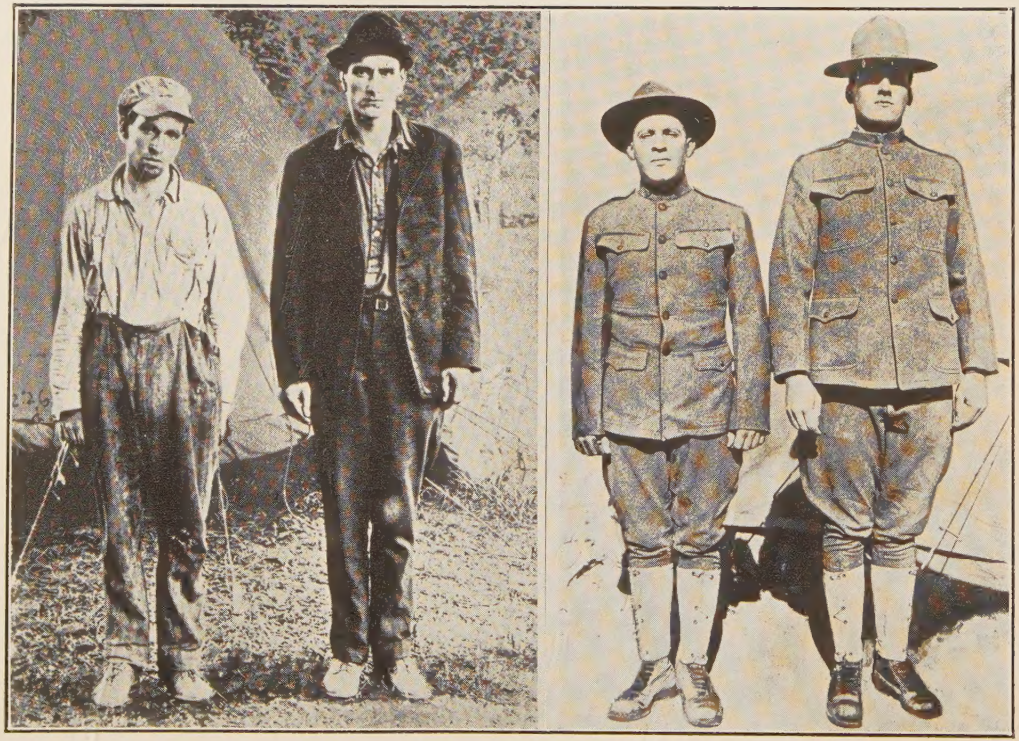

Two Southerners Who Enlisted — The Same after Five Months of Military Life

PHOTOGRAPHS FURNISHED BY LIEUT.-COL. JAMES B. ALLISON, 2ND SOUTH CAROLINA INFANTRY

(Courtesy of The New York Times)

Universal Military Education and Service

The Swiss System for The United States

By

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Second Edition, Revised and Enlarged

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PREFACE TO THE SECOND EDITION

THE first edition of this small book was exhausted in a few months. That fact, and the recent call to arms, which was foreshadowed in the first edition, makes it worth while to issue a second.

The title may now prove obscure, because of late we hear only of military *training*. That, however, relates especially to physical exercises, while military *education* includes also the mental and moral aspects of the subject.

An appendix has been added consisting of notes marked A—B—C, etc., which bring the book up to date, and an index makes it more available for reference.

L. H.

PREFACE

ANY one looking at the title of this small book might ask why a student of medicine should presume to meddle with questions which at first glance seem to lie entirely in the field of pedagogy. Therefore, a word of explanation is in order.

More than a third of a century ago, when my attention was called to the development of near-sightedness in early life, I examined the eyes of over a thousand public school pupils—finding then, as had been found before, that it was impossible to graduate half a dozen from the high schools without making one or more of them near-sighted. I therefore advocated "setting-up" exercises in the schools to assist in lessening the progress of this condition—for reasons which will be given later. About that time also I began to instruct the senior class in a medical school, and soon learned how much young men might be improved by a little systematic training in promptness, exactness, restraint, efficiency, and other soldierly qualities. These convictions grew, and early in 1914 I addressed a circular letter to

some twenty or more of our larger colleges and universities, inquiring as to opportunities for training in certain directions. Part of the data then collected has been used here.

Soon after that, the war began in Europe, and within a few months the question arose as to how America could defend itself if attacked. That gave an additional reason for stating certain conclusions concerning education which had been taking shape for many years. Accordingly, last year I published *A Brief for Military Education in our Schools and Colleges*. No apology is offered for repeating here some of the statements made then.

It is probable that even now the accumulated observations and notes would still remain unclassified, were it not that a recent vacation was spent browsing among the libraries in Washington. There the book was dictated—corrections being made later to accord with more recent facts and figures.

This small by-product of a teacher's work is not an hysterical attempt to deal theoretically with a subject which happens just now to be the fashion. Instead, it aims to be a condensed statement founded on long experience and on facts which seem to lead to the conclusion that some form of military education should be universal

in this country. If the subject receives from educators and legislators only a small part of the attention to which apparently it is entitled, I shall be well repaid for this digression into a new field of study.

L. H.

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BUFFALO, NEW YORK.

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Universal Military Education

CHAPTER I

WHY ANY PREPARATION?

The object of this study is to determine whether the two problems of education and of national defense are so related that to solve one problem is to solve the other.

The method to be followed requires the sacrifice of literary effect to brevity. For the sake of exactness the statements unfortunately must often be made in figures. In a word, the question must be treated very much as one of biology or of optics.

The plan which suggests itself is to examine first our system of education, ascertain its defects, and find whether methods which are to a certain extent "military" would tend at all to correct those defects.

But there are those who find this proposition contrary to their wishes and convictions. Es-

pecially do they deny there is any necessity for a larger army, and they insist that a considerable number of soldiers in this country would inevitably lead to what they delight to call "militarism."

Of course, it is quite possible that this minority is right, so instead of beginning at once to study the defects in our schools, it is necessary to deviate from the more natural plan. We must first disavow bloodthirsty intentions and ask in some form the familiar question, why any preparation for defense? Or, what is adequate?

These and similar trite questions have been answered so many times that only the desire for fairness of statement and ample facts from which to draw conclusions would warrant repetition now.

Therefore, for brevity and exactness, the statements will be confined largely to figures. Those who are already satisfied that this country should quickly make unusual preparations for defense, and those who abhor statistical data, can well omit the remainder of this first chapter and most of the second.

At the very outset, let us remember we all agree on the one great object to be obtained—**Peace.**

We all hope, too, that ultimately armies and armaments will be superseded by an international court of arbitration.

But the prospects in this direction are not encouraging. There are two difficulties in the way. The first and most important is that each strong nation prefers to depend on its own right arm, instead of giving over its fortunes to a board or committee. Conciliation or arbitration means some agreement, and if one party will not, *he simply will not*, and that is the end of it. To keep on arguing is about as useful as to talk to a brick wall. Moreover, the decision by some of the great powers not to arbitrate certain essential points was reached at The Hague long before the present war began.

Another reason why conciliation and arbitration are not possible for us is the military and naval weakness of the United States. If we were strong, other powers might listen to us, but at present our protests might as well come from China.

At any rate, the European war shows how impossible it is to compel even a small group of powers to arbitrate, or to force others to abide by the decision of an international court. The combined population of the four Central Powers aggregates less than 125,000,000, whereas the total populations of the Entente Powers amount to nearly five times as many. (1)[1] Yet the smaller

[1] Figures in parenthesis refer to the appendix giving "Sources of Information."

group of well prepared, well trained, brave men are able to withstand a force many millions greater.

However it may be in the future with an international court of arbitration, we must face present facts and prepare to deal with them.

Some good Quaker may be opposed to military education or fighting of any sort because he believes it contrary to the teachings of the Bible, but if we use good sense in other matters, why not in regard to defense?

If we are smitten on one cheek we do not turn the other; we do not abandon thought for the morrow, considering only the lilies of the field; we do not sell all that we have to give to the poor. A very considerable reward would be paid by the writer for the name and address of any one who does so—provided he is not already an inmate of the poorhouse or of an institution for the fe ble-minded.

Moreover, if the Bible is to be considered a guide in such matters, then we certainly should have universal military education, for the first chapter of Numbers states that the children of Israel were numbered "every male from twenty years old and upward; all that were able to go forth to war"; and apparently to make sure that no man should shirk his duty, the then Director of the Census stated the number in each family, and repeated

each time the same formula for "all that were able to go forth to war."

In spite of this biblical precedent, our pacifist friends say they prefer to let the other nation make ready, trusting it will not attack us—because the very act of our preparation tends to militarism. But most Americans agree that if we must trust some one, we prefer to trust ourselves, —to deal with our own possible dangers of militarism, rather than trust any stronger and poorer foreign nation to let us alone in our weakness and our wealth.

With this understanding as to the fundamental desire for peace and for an international court of arbitration, if that becomes practicable, we are ready to ask more directly—

Why any preparation for defense?

Why should any nation attack the United States? For three reasons: Because we are rich, weak, and have given poorer but stronger nations ample reasons for hostility. Let us look at the facts.

First: At the end of this war each of the belligerents will be left with an enormous debt.

Second: The United States will still remain, as it is now, the richest country in the world, and also the weakest of the great powers, if both army and navy are not immediately strengthened.

Third: We have already excited the animosity of the Central Powers by sending munitions to their enemies, and, in fact, any nation could start a war at any time with us by "calling the bluff" of our dangerous Monroe Doctrine. Germany apparently will be left without colonies, but with a navy still larger than ours, and with an army many times ours—all veterans.

Now if the story of forty centuries teaches anything, it is that nations, like men, are born and flourish and die. With all, there is a constant struggle for existence and for supremacy in government and commerce. The stronger and more intelligent, though less in number, wipe out the weak, as we have driven out the Indian and enslaved the negro. If the weaker nation is also rich in lands or goods, there is a double incentive to conquest. Our first Mexican war is often cited as an example of that. From the age of the Shepherd Kings of Egypt, down through the centuries of Greece and Rome, to the days of Belgium and Servia, it has been the same old story of constant struggle for political supremacy and wealth. Is there any reason why human nature should suddenly change now? As we are rich and weak and have given ample reason for attack, why should that not come to us as it has to others?

So it looks as though it would be wise to have a

force in reserve, for all human experience teaches us that war is as certain to follow peace as rain to follow sunshine. And which is the more sensible? —to put our national roof in repair while there is still time, or to fold our hands placidly now, watching the agonies of our neighbors and listening to those who sing about peace, until the storm bursts on our heads also, with all of its fury?

CHAPTER II

WHAT PREPARATION IS ADEQUATE?

What is adequate is not a matter of opinion, as many seem to imagine. Preparation must be proportioned to the force of the probable attack. One man can fight one burglar; for a mob of fifty men we need a squad of armed policemen. So on the sea, if a possible enemy has twenty-odd battleships, preparedness would not seem to be adequate until we also have at least an equal number. Five cruisers should be opposed by five cruisers—and so on. It is arithmetic—very simple arithmetic. The rivalry for supremacy is unfortunate and very costly, it is true, but experience has shown that when one great nation arms, its opponent must either arm or submit. And it is much more unfortunate and more costly to submit than to arm.

With this understanding of the simple arithmetical problem which determines what is adequate preparedness, we are ready to inquire how that principle applies to the navy and army.

The navy forms our first line of defense, and at

the outset we must learn from books, or still better by visits to navy yards, certain distinctions fundamental to any such discussion.

The three factors of displacement (with thickness of armor), guns, and speed determine the fighting value of a ship. Some craft, still officially listed as "battleships," are practically good for nothing as compared with a modern dreadnought, super-dreadnought, or battle cruiser.

To appreciate this we must recall for a moment recent changes in naval architecture. Some twelve or thirteen years ago England built ten ships, larger and stronger than any then afloat. That was the pre-dreadnought age. Then, in 1906 she completed the famous *Dreadnought*, a ship of about 18,000 tons, with correspondingly heavy armor, —carrying 10 twelve-inch guns and with a speed of twenty-one and a quarter knots an hour. Her appearance created an epoch in naval architecture. England followed this dreadnought with nineteen others of the same class. Germany built thirteen, while we built eight, thus slipping back to the third, possibly the fourth rank.

Meanwhile the *super-dreadnoughts* have been evolved. They are still larger than the dreadnought, with heavy armor, 10 to 12 guns of twelve,-fourteen- or fifteen-inch diameter, and a speed of twenty-one to twenty-three knots.

During the last ten or fifteen years a third type of capital ship has come into being. The relatively light and swift simple cruiser has been enlarged, given heavier guns, and has grown into the *battle cruiser*. The first of these was completed by England in 1908. They are like the super-dreadnoughts, but have much lighter armor. The *Queen Mary*, sunk off Jutland, had a displacement of 27,000 tons, 8 thirteen-and-a-half-inch guns, and a speed of 35.7 knots[1] an hour —faster than the ordinary train.

Finally, the seagoing submarine has added another type to the listed capital ships. The *Deutschland*, although a merchantman, could easily become a formidable man-of-war. Her measurements are given as 315 feet long, 30 feet beam, and capable of carrying 750 tons of cargo.

These types are recalled for the reason that each capital ship may be counted as a unit, with a certain number of smaller craft, supply ships, submarines, etc., which it has or should have associated with it. With this understanding of terms we can ask:

(*A*) *What is the present strength of our navy?*

The Navy Yearbook of 1915 gives the following list of our dreadnoughts.

[1] It will be remembered that a knot is about 1 $\frac{1}{6}$ miles.

LIST OF BATTLESHIPS

Completed in	*Name*	*Tons Displacement*	*Main Armament*	*Speed Knots*
	DREADNOUGHT TYPE			
1910	*Delaware*	20,000	Ten 12-inch	21.56
1910	*North Dakota*	20,000		21.01
1911	*Florida*	21,825	Ten 12-inch	20.75
1911	*Utah*	21,825		21.04
1912	*Arkansas*	26,000	Twelve 12-inch	21.05
1912	*Wyoming*	26,000		21.22
1913	*Texas*	27,000	Ten 14-inch	21.0
1914	*New York*	27,000	Ten 14-inch	21.0
	BUILDING			
1915	*Nevada*	27,500	Ten 14-inch	20.5
1915	*Oklahoma*	27,500		20.5
1916	*Pennsylvania*	31,400		21.0
1917	*Arizona*	31.400	Twelve 14-inch	21.0

In addition, about twenty battleships are listed, the majority of them either antiquated or out of commission. Most naval authorities give us credit for eleven or twelve real battleships, dreadnoughts included—at the outside fifteen, bearing in mind the important fact, that *we have no super-dreadnoughts nor battle cruisers.* It is impossible here to go into detail concerning the number of submarines, many in the list not being completed. (Note A)

The condition of the navy has not changed materially since the 14th of January, 1915, at which time Admiral Fletcher made fifteen specific complaints (7—page 670):

Shortage of officers
Shortage of men
Lack of fast armored cruisers and fast light cruisers
Limitations of mobility and seagoing qualities of submarines
Lack of aircraft
Lack of radio direction finders
Too frequent overhauling of battleships
Necessity of maintaining full complements in active ships of the fleet
Need of additional mining and sweeping vessels
Desirability of mobilizing ships in reserve annually with an active fleet
Need of battle target practice at long ranges
Necessity of increased facilities at fleet rendezvous
Provision for division commanders for mining and auxiliary divisions
Provision for more speed in design of fighting craft intended to co-operate with the fleet
Need of anti-aircraft.

A misleading statement is often made to the effect that our quota of men for the navy was filled some time ago, but that was only because the number of enlistments had been cut down for economy below the usual limit, and also because several battleships were out of commission.

An act of Congress allowed, until recently, for a personnel of only 51,500, which is evidently short of actual needs, for several battleships, cruisers, gun-

boats, and destroyers are out of commission, or in reserve with approximately 10% of full complement—just sufficient to take care of the machinery and preserve the ships from deterioration. Before a new ship can go into commission, one already in commission must be laid up in order to man the new one.

When, therefore, a Secretary of the Navy (12) declares that other countries will be in no condition to attack us after the present war, and uses his position to insist on a smaller navy than experts recommend, such obstinate blindness constitutes a danger to the nation. We have paid dearly already in blood and money for the blunders of politicians, and apparently we are to pay again.

Practically every other country places a professional sailor in the Cabinet as Secretary of the Navy, and a soldier as Secretary of War, but in our fear of "militarism" we still cling to bygone methods, and pay heavily for that mistake also, as Upton has shown, in gold and in human lives. (19)–(20).

(*B*) *How does our navy compare with that of other nations?* An idea of this is obtained from Fig. 1. This represents the estimated condition early in June, after the battle off Jutland, but any such estimate made during a war is like a stock quotation, "subject to change." The fact remains

that England's naval strength is unquestionably first, that of Germany much greater than our own, with France next, whose strength is a little less than ours, and Japan about the same as that of France.

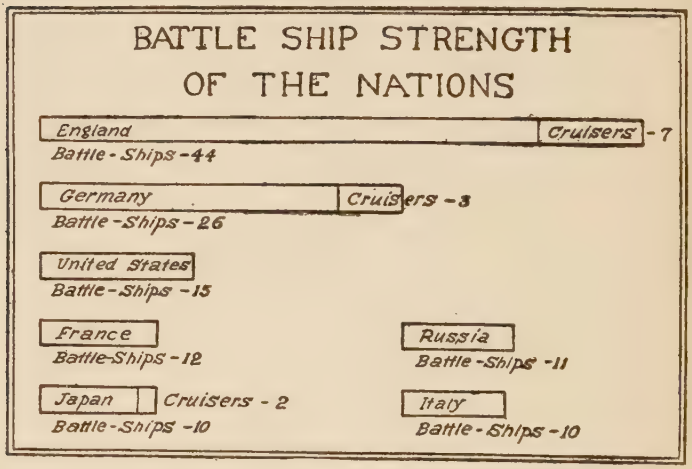

FIG. 1

Our comparative lack of naval protection per mile of coast line is seen in the accompanying diagram. Fig. 2. (18). (Note B)

(C) *What experts have estimated our navy should be.* The General Board has recommended the following ships, a certain number to be commenced

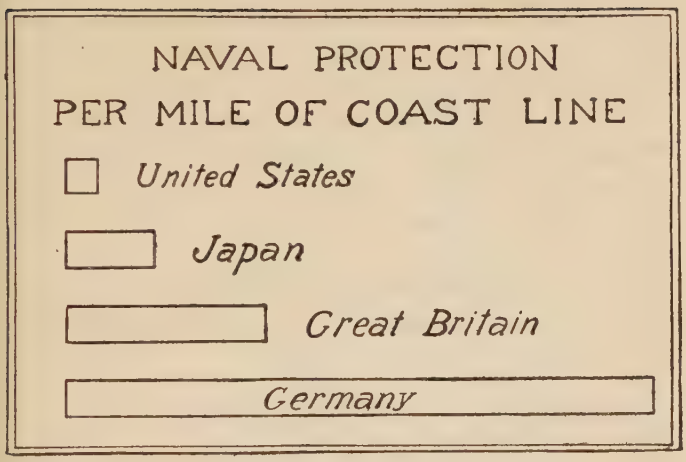

FIG. 2

this year and all to be finished within five years. They are as follows:

10 dreadnoughts (4 this year).
6 battle cruisers (4 this year).
10 scout cruisers (4 this year).
5 fleet submarines (none this year).
50 destroyers (10 this year).
58 coast submarines (27 this year).
3 oil fuel ships (1 this year).
1 repair ship, 1 hospital ship, 1 transport.
2 destroyer tenders (1 this year).
1 fleet submarine tender.
2 ammunition ships (1 this year).
2 gunboats (1 this year).

(*D*) *What has Congress decided that the navy is to be?* After six months of discussion, on the 18th of May (7–page 1218), this national question of the defense of the country was settled in the House by a party vote. That decision was for five battle cruisers, with other craft in proportion. The Senate, however, seemed more alive to the needs of the situation, and the report of the Naval Committee, presented on the 13th of July, provided for better defense. The measure as reported contemplated—

eight capital ships to be laid down in the coming year, and for the completion within three years of the program which the Navy General Board had estimated.

The three-year program calls for an expenditure of $588,180,576, of which $315,836,843 is appropriated for 1917. New construction in 1917 would cost $110,726,000. The House bill called for a total expenditure of $269,000,000 in 1917.

The Senate Committee has also provided for a peace strength of 74,700 men, and gives the President power to recruit the navy's full strength in emergency. (Note C)

It should be remembered that most of these estimates were made prior to the arrival of the merchant submarine *Deutschland* at Baltimore

early in July. That demonstration of the ability of undersea ships to carry large cargoes of ammunition or numbers of men, or a large armament if necessary, will undoubtedly modify still further the present methods of naval warfare.

The army: Let us ask as we have of the navy.

(*A*) *What is its present strength?* For several years the total number had been about 100,000. Some two-thirds of those men were assigned to the coast defenses, to the Panama Canal, to insular stations, or to the duty of keeping in order useless small forts scattered over the entire country. These forts the politicians insist on retaining for local reasons, in spite of repeated official protests from the army. The remaining one-third, or about 30,000 officers and men, constituted the mobile army available for actual defense.

The lack of equipment of the army has been shown often in statements by those who know the conditions best. A general idea of this is given by Major-General Leonard Wood. After describing our woeful need of rifles, he says:

> We are very short of field artillery and field artillery ammunition, alarmingly short of both, and if we should suddenly become involved in war we should be absolutely without a reasonable supply of either artillery guns or ammunition. Soldiers today without ade-

quate artillery are as helpless as a lot of men armed with butcher knives.

As for the new heavy mobile guns we have not a single one in the United States. The condition in reference to field artillery and of all types of field artillery ammunition is a cause for grave alarm. This has been repeatedly reported during the last few years.

(*B*) *How does our army compare with that of other nations?* The peace strength is seen in Fig. 3.

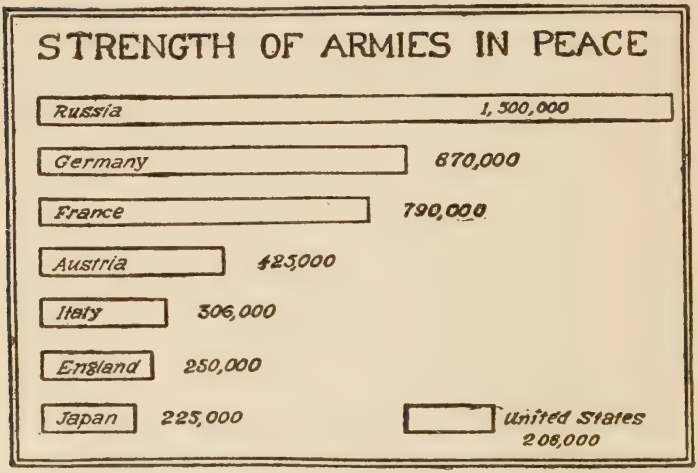

Fig. 3

The war strength in proportion to population is seen in Fig. 4. These comparisons tell their own story.

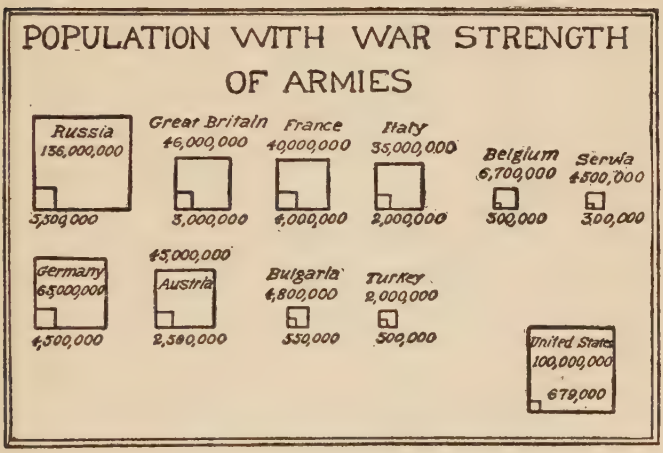

FIG. 4.

The large square shows the population of each country (the colonies not included). The corresponding smaller square shows the estimated war strength of the armies. For the United States the smaller square shows the *maximum* war strength provided by Act of Congress of May, 1916.

(*C*) *How many men are "adequate" according to the estimates of experts?* Opinions concerning that are even more abundant than concerning an adequate navy. Some worthy citizens—perhaps with memories of qualms at sea—may doubt their abil-

ity to manage a fleet, but a legion are quite sure they know all about armies.

Yet, as we have seen, this question of how many men are adequate is not in any way a matter of opinion. It is arithmetic. While the rest of us were speculating or guessing, a group of experts at the War College were patiently figuring out the size of armies of different nations, their equipment, the food and animals required, comparing all with the tonnage of their naval and commercial fleets.

Then, on the 15th of September, 1915, "In compliance with instructions of the Secretary of War," the Army War College made a statement of "A Proper Military Policy for the United States." (10) In that, the College gave (p. 117) a table showing what the conditions were in August, 1914, as constituting a "reasonable estimate" of the preparedness of the great powers for over-sea expeditions. As some of the details of this table are technical and confusing at first glance, a statistical diagram has been made, which shows at once the number of days which each of the great powers would require to land an army on our coast.

The War College says (page 118):

Hence it can be seen, when we take into consideration the possible two months' delay provided by the

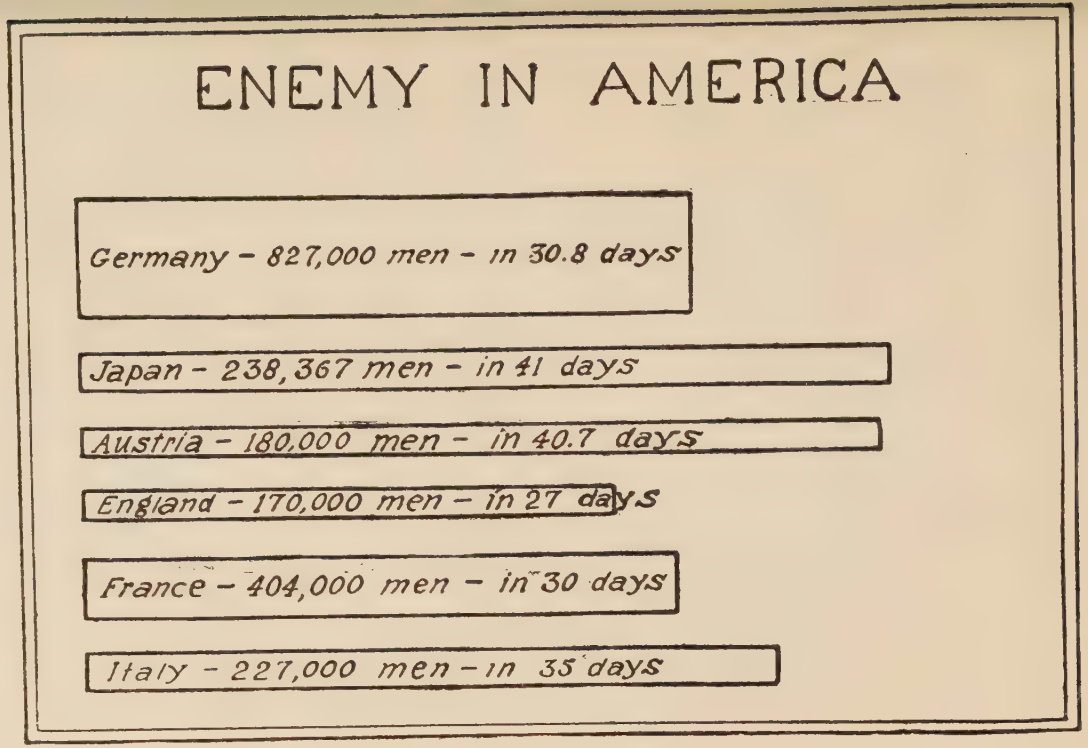
ENEMY IN AMERICA
Germany - 827,000 men - in 30.8 days
Japan - 238,367 men - in 41 days
Austria - 180,000 men - in 40.7 days
England - 170,000 men - in 27 days
France - 404,000 men - in 30 days
Italy - 227,000 men - in 35 days

Fig. 5

Navy, that *our system should be able to furnish 500,000 trained and organized mobile troops at the outbreak of the war and to have at least 500,000 more available within 90 days thereafter. Here, however, it must be pointed out that two expeditions alone will provide a force large enough to cope with our 1,000,000 mobile troops, and consequently we must at the outbreak of hostilities provide the system to raise and train, in addition, at least 500,000 troops to replace the losses and wastage in personnel incident to war. To provide this organized land force is the military problem before us for solution.*†

Why did Congress delay in acting on these facts? The reasons are few and their trifling value ought to be appreciated.

(*a*) Outright denial is made of the facts. Some simply say, "I don't believe it"—and make no further inquiry. With them no argument is possible, any more than with the man who insists that the sun goes around the earth.

(*b*) Another objection is that experts are biased, or it is hinted that the officers are in league with munition manufacturers. This is also simple assertion. It is true that officers have differed concerning the general phases of the subject, but apparently no expert, in or out of the army, has questioned the statistics presented by the War College.

(*c*) It is a popular notion that the average

† Changed to italics by the author.

military man is eager for war—that he delights in fighting. That statement is either the result of ignorance or is a deliberate falsehood. Excitement may indeed find expression in songs and cheers. I have seen that. But it has been my misfortune, at the beginning of three wars, to see soldiers and officers bid good-bye to their wives, their children, their friends, and then with heads erect—sometimes with moistened eyes—face front, and march to their duty. There is some contrast between that brave response to a country's call, and the cringing doubts and innuendos of the shirkers. (Note D)

(*d*) A final objection to these facts is that such preparation would be costly, and a political party would be attacked by the pacifists if it dared to recommend any large expenditure. Accordingly, the War College was requested by the Secretary to prepare a second plan for defense, whose object was to keep the estimate within a certain amount. It was to this second estimate that most of the politicians pinned their faith, and therefore those figures are most frequently quoted. *That did not, however, show what we needed, but only what was more economical.*

(*D*) *How many men has Congress given us?*

Although the report of the Army War College just quoted was made to the Secretary of War on the 15th of September, 1915, and although Con-

gress convened early in December, it was not until the 16th of May, 1916, that the Senate and House conferees reported the bill H. R. 12766 for the reorganization of the army.[1] It was a voluminous document, the details of which it is unnecessary to consider here. Moreover, some of its sections are at least obscure, perhaps unconstitutional. The point which interests us at present is the size of the army.

This conference agreement established a minimum of	160,000
fighting regulars, together with Medical, Quarter-Master, Signal Corps, etc.	31,169
Or a total minimum of	191,169
The fighting force may be augmented to	175,000
Or adding the various corps	31,169
The total may become	206,169
When war is threatened this force may be increased by Executive order to about	254,000
The strength of the National Guard is fixed at	425,000
This gives us a maximum war strength of	679,000

A "joker," however, is included in the law, by which, according to Section 24, *the increase is to require five years for its completion.* Considering the untrained condition of the National Guard,

[1] From the *Army and Navy Journal*, of May 20th.

the whole thing means that we are to have ultimately a mere fraction of the men estimated by the War College as adequate.

The cost for 1917 of the increased army is to be $267,597,000.

Professor Bingham of Yale, in the *Yale Review*, calls the army reorganization act a pork-barrel measure and says:

> Millions of dollars are to be handed over by the Federal government to officers whom Federal officials cannot discharge for incompetence, and to organizations which those who are responsible for national defense cannot disband for inefficiency or insubordination.

(Note E)

Although this recent action of Congress is, as far as it goes, in accord with the needs and wishes of a great nation, it is probable that a modification of the present plan must soon be made, especially by increasing the size of the undersea craft. Whatever that increase in the navy may be, however, it is evidently dangerous to place our entire reliance on a single line of defense at sea. If that line could be broken at any point, our coast would be open to invasion, and there would be still the same necessity for land defense—a defense which could easily require the calling out of every available man. In a word, in spite of a great navy, there remains the same necessity for universal military education.

CHAPTER III

HOW SHALL WE PREPARE?

AS there seems to be ample reason for preparedness, the question is, what is to be done? We need three things: money, time, and trained men.

First. **Money** gives us not only modern ships, submarines, mines, and aircraft, but cannon, machine guns, and a thousand other necessities for both navy and army.

We have the wealth—more than any other nation. (3) In 1912 we had $187,000,000,000. The wealth of other nations as compared with ours is seen in Fig. 6.

Moreover, according to figures given by William Peter Hamilton (17) the wealth of the United States increased between 1904 and 1912 at the rate of nearly eleven billions a year. Since 1912 there is every reason to believe that it has increased quite as rapidly. Therefore, at a moderate estimate, our present wealth considerably exceeds two hundred billions of dollars.

Few persons appreciate how vast a sum one

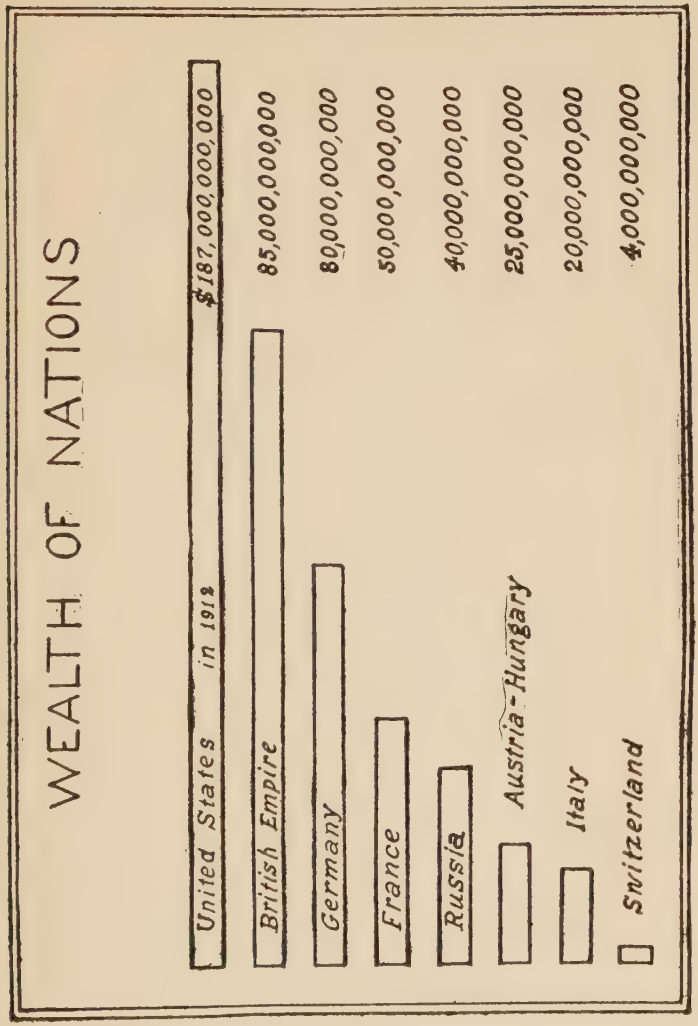
WEALTH OF NATIONS
United States in 1912
$187,000,000,000
British Empire
85,000,000,000
Germany
80,000,000,000
France
50,000,000,000
Russia
40,000,000,000
Austria-Hungary
25,000,000,000
Italy
20,000,000,000
Switzerland
4,000,000,000

FIG. 6

billion dollars is. To count it a man would have to begin the day he was born, count the dollars as fast as the clock ticks—60 in a minute, 3600 in an hour—he would have to work ten hours a day, Sundays and holidays included, and when he was seventy-six years old his task would not be quite finished. That is one billion, and we have two hundred of them.

Money for preparedness is only a national insurance. We all insure against losses by fire, accident, and other mishaps. These are ordinary business charges, and we pay them as a matter of course. But the nation as a whole we leave largely to its own risks. With our national wealth considerably over two hundred billions, an annual expenditure of three quarters of a billion for our army and navy would be less than one half of one per cent. of that wealth—a per capita cost per day of a trifle over two cents. Is it not worth that, or possibly even a nickel a day, to each of us to be assured the enjoyment of "life, liberty, and the pursuit of happiness"? Even as a business proposition that seems a low rate for a national "blanket" insurance.

And how to get this money? Tax the luxuries heavily and increase the income tax. Further details in the forthcoming census reports will give

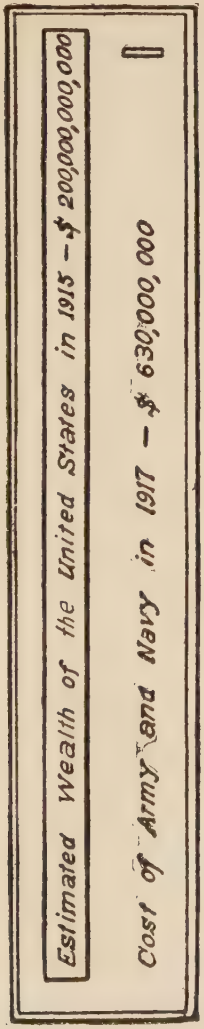
Estimated Wealth of the United States in 1915 — $200,000,000,000
Cost of Army and Navy in 1917 — $630,000,000

FIG. 7

valuable hints concerning the millions now squandered by the American people.

Only a very small part need come from those of moderate or certainly from those of small means. A fund amply sufficient for defense could be raised simply by increasing the present super-tax.

A comparatively small tax on what we all agree are luxuries and frivolities would be amply sufficient to meet all expenses for defense on land and sea. The question of cost may be formulated in this wise: Are Americans ready to give up this small part of their luxuries in order to keep their country entire and safe from invasion?

How we spend our money is an interesting question. Some idea of this is given by Fig. 8. The statistics are only approximate—to the millions—as is evident, but they have been selected from reliable sources (4) (21)–(22) and a study of them is suggestive of prohibition, of methods of taxation, and is more convincing as to our vices and our extravagances than volumes of sermons. And yet Congress haggles over the cost of one battleship when *we spend each year for chewing gum more than enough to build two such ships.*

It is true that this accumulated evidence of America's extravagance might in one way be offset by hundreds of millions annually spent for churches and given by individuals for colleges, hospitals, and

SOME ANNUAL EXPENSES

Intoxicating Liquors	$ 2,000,000,000
Automobiles Cost and Keep	$1,800,000,000
Tobacco	$ 1,000,000,000
Jewelry and Plate	$ 800,000,000
Education	$ 700,000,000
Army and Navy (1917)	$ 630,000,000
Confectionery	$ 200,000,000
Millinery	$ 85,000,000
Patent Medicines	$ 80,000,000
Chewing Gum	$ 34,000,000
One Battle Ship (about)	$ 12,000,000

FIG. 8

charities. But in this study we must confine our attention to results, good or bad, already achieved. Efforts to improve present conditions are of course most admirable, but are foreign to conditions which actually exist. The fact is, the *United States leads the nations in extravagance.*

The "Pork Barrel" must be abandoned. It is a notorious fact that thousands or even millions appropriated in the past for defense have gone into the pockets of the constituents of prominent politicians. It has furnished "pork." Of Republicans and Democrats alike this has been proved repeatedly.

George von Meyer (21), former Secretary of the Navy, has said in an official report:

> The United States has over twice as many first-class navy-yards as Great Britain, with a navy more than double the size of ours, and more than three times as many as Germany, whose navy is larger than that of the United States.

He recommended that Congress dispose of eight of these, but no such action was taken.

> During the first fifteen years of the present century, [the report continues], we spent $1,656,000,000 on our navy, while during the same period Germany spent $1,137,000,000. Yet today Germany's navy is much stronger than ours. And only a small part of that difference is due to difference in wages.

Until within a few years no naval appropriations could pass the Senate which did not meet the sanction of both a Northern and Southern senator, each of whom was a member of the Committee on Naval Affairs.

The army has suffered as much as the navy from this diverting of funds—which, to say the least, have been "misappropriated." Indictments of the "Pork Barrel" would fill a book much larger than this. (Note F)

We also need time. The European war began with August, 1914. Early in December, 1914, our Congress convened, and in spite of the complicated foreign relations, Congress made no effort to increase the army or navy until the spring of 1916. All this in the face of the fact that it takes at least five or six months to train a soldier; months to build a single large gun, and two or three years to build a battleship.

And are Congressmen afflicted with "hysteria"? Not much. The majority have no conception of the scenes through which those of us passed who were caught in the belligerent countries at the outbreak of the war. They do not seem to know that the whole of Europe is ablaze; that the embers are falling on us, and that the conflagration may come at any time—above all that the responsibility for our defense rests in their hands.

We need men—and need them greatly. A volunteer force is insufficient in a national crisis. That has been proved again and again. Every continental power, and now even England, finds conscription necessary. So did we during the Civil War.

The inadequacy of the volunteer method was demonstrated while these pages were in preparation. On the 4th of March, 1916, the President issued a call for 20,000 volunteers. Enlistments began the middle of that month. Up to the 15th of April—thirty-one days—the number of recruits had reached 3927. That is less than 50,000 a year—that, too, at a time when Germany was threatening us on one side and Mexico on another. At that rate it would take over sixteen years to raise as many soldiers as Germany could land on our coast in 30.8 days. How about that boast that a million would spring to arms in a day? We need men, men, men, and we need them greatly.

CHAPTER IV

THE SWISS AND AUSTRALIAN SYSTEMS

OUR problem seems to reduce itself to a formula about like this: How can we obtain the maximum number of trained men in the minimum time, to be held in reserve, if desired, but thoroughly prepared and ready for defense at any moment? The very statement of the problem suggests the remedy. We are reminded at once of the plan which has been adopted in Switzerland, and, more recently, in Australia.

The basic principle of these governments is the same as that of our Republic: that as a government protects the property and life of the citizen, therefore the citizen in return must be ready to defend the government, even at the cost of his life.

The difference between Switzerland and America is that there the theory is put into practice, here it is not. It is practically optional now with each American whether he will volunteer to fulfill his part of the contract with his government, or whether he will shirk his duty, have some one else fight for him and keep his own skin whole. Let

us, therefore, examine a little more closely these systems of universal military education in Switzerland and in Australia.

The essential features are universal service in the form of what is practically a military "Continuation School."

The most authentic and condensed statement concerning the Swiss and the Australian systems is in Senate Document No. 796, presented on the 26th of January, 1915. (23) (24) The account here is adapted from that document.

The Swiss system is the older, having been completed in 1907. That country is in size and population about the same as Massachusetts. Like that State, it has somewhat less than four million inhabitants, but it can nevertheless muster immediately an army of half a million with a much larger number still in reserve.

The military education of the Swiss boy begins during childhood, in the special attention given to gymnastic training. Even small children, girls as well as boys, carry their schoolbooks and other packs on their backs, so later the recruit finds his knapsack an old acquaintance. This custom improves the posture, and so tends to lessen spinal curvature and nearsightedness, which result partly, as we shall see, from a stooping posture.

When a boy is eleven years old he ordinarily

joins one of the so-called "cadet corps." These are voluntary organizations, formed in nearly every town. Here he obtains his first practice in the "setting up" exercises and marching drills, and some training in the manual of arms.

"Each corps adopts its own simple and inexpensive uniform, generally the same in each locality, and the State furnishes a light cadet musket and ammunition for target practice."

Between the ages of sixteen and twenty the Swiss boy may, if he chooses, become a member of a preparatory military organization, which operates on the same lines as the cadet corps, except that the regular army musket is furnished and the shooting is more serious. It is laid down as a principle that in these organizations the chief attention must be given to gymnastics and shooting. It is not desired to turn out half-instructed recruits, but vigorous and agile youths. The State gives no subvention, but furnishes arms and ammunition.

During his twentieth year, about midsummer, the young Swiss must present himself for universal military service. For this he must first pass a physical and literary examination—failure in the first meaning rejection, in the second less opportunity for preferment. Strange as it may seem to some Americans, inability to pass either examina-

tion is usually a considerable disappointment and source of chagrin to the candidate.

The military instruction is at a camp or garrison, and is similar to that at Plattsburg or at military schools. The recruits are there assigned to the different divisions of artillery, cavalry, infantry, etc., according to their preferences and their fitness.

During this time the soldier is clothed, rationed, and housed, and receives ten cents a day as pay. He serves from sixty to seventy-five days, according to the division to which he belongs.

Three classes of recruits succeed each other at each camp during the summer. From the age of twenty to thirty or thirty-two these young men constitute what is known as the *Élite* of the army, and during this period they are called together for sixteen days every year, or two, according to the arm of service to which they are assigned. They form the groups of active service, and are ready for immediate mobilization.

When a man reaches thirty-two (in the cavalry, thirty) he passes to the *Landwehr;* after forty he belongs to the *Landsturm.*

The opportunity to become an officer is open to practically every young man who cares to acquit himself satisfactorily. The ranks of the officers are about the same as ours, but the pay in this and

other continental armies is very much less than in the United States.

Every Swiss citizen, at home or abroad, between the ages of twenty and forty-four, who is not enrolled in the active or reserve armies is obliged to pay a military tax. Therefore all men (about 50 per cent.) who are not accepted as recruits, and all who for any reason whatever are excused from military service, pay the tax. It is of three kinds: (1) military poll tax of 6 francs; (2) military property tax of 0.15 per cent. of assessed value of property (property under $200 not taxed); (3) military income tax of 1.5 per cent. on income.

The result of this system in Switzerland is that in 1911 the number of those under training for the two months or more during the summer was about 210,000. These have proved available for a first line of defense in forty-eight hours. There were also over 275,000 trained reserves (*Landsturm*) ready for the second line almost as promptly as called for—a total army of roughly half a million. (1)

The cost of that large army of effective troops during that same year was less than eight and a half million dollars. Our former standing army of about 100,000, be it remembered, and practically no trained reserve, cost the same year a little over one hundred million dollars.

"The annual appropriations for our army show that each regular American soldier costs twenty-eight times as much as his Swiss comrade."

The Australian system also is outlined in the Senate document already referred to, and a copy of the acts establishing the system is contained in an appendix to the *Australian Naval and Military Manual of 1912 and 1913*. In Switzerland, as we have just seen, the boy begins at about eleven years in a volunteer organization. When the young Australian has reached the middle of the winter of his twelfth year, he is examined, and if thoroughly fit, is received as a "junior cadet." He is given a simple uniform, but no musket.

From twelve to fourteen, he is trained for ninety hours each year in gymnastics, "setting up" exercises, and easy military maneuvers.

When he is fourteen years old he becomes a senior cadet. He receives slight additions to his uniform and an article which he especially prizes —a cadet rifle and belt. Even at that age he is encouraged to practice as a marksman. When sufficiently proficient, or when he is large enough, he is allowed to have a gun of the size issued to a man.

From fourteen to eighteen the course is much more rigorous, the discipline more exact. The boy is practiced in marching, guard duty, tactics, and

still further in marksmanship. During these four years he must have at least twenty-four drills of one hour, twelve of two hours, and four of four hours.

When eighteen or nineteen, the young man is formally enrolled, and becomes a fully equipped soldier. The government gives him underclothing in addition to his uniform, a kit for tent life, in the winter, and the regular service rifle with the bayonet. With this outfit he reports for duty each year, and spends sixteen days in the department to which he was assigned—at least one half of that time being spent in camp. This annual drill is continued until the Australian is twenty-six years old. At that time, if he can show that he has served creditably, he is released from further obligation of even those two weeks of service in each year.

But from his twenty-sixth year until he is sixty he may be called for home duty, just as every able-bodied American may be called by our President. The difference is that in Australia the call would furnish an army of well trained men, and in America, an undisciplined mob.

The result of this plan is that in 1914 Australia had, including cadets, a standing army of 105,000 (a little larger than ours before the recent increase), and in case of war could at once call out 750,000.

Australia has also about 2000 men in its navy.

The total cost of its army and navy in 1914 was about eleven million dollars, while during that same year our army alone cost us about one hundred million dollars.

It should be observed that in both the Swiss and the Australian systems of universal military education *the recruits must have a certain amount of education*. Those who cannot pass the literary examinations satisfactorily must either qualify before they are accepted, or they are taught the common school branches with their military training. Inasmuch as such recruits find it to their great advantage to come up to a certain degree of excellence in these studies, illiteracy has been reduced to much less than in America. This point will be referred to later.

This entire Australian plan, although outlined by Lord Kitchener, met at first with violent opposition from practically all the women of the colony and many of the men, particularly those of socialistic tendencies. After but a year's trial, however, such an improvement was noticeable in the physical condition of the pupils, in their promptness, obedience, and efficiency, that the system can now be considered a permanent part of the life of that people.

Military education in other countries. For the sake of completeness mention should be made of the plan of military education recently adopted in Holland. This is somewhat similar to the Swiss or Australian system.

The necessity for immediate preparation in Holland has resulted in the enlistment of every available man. But accounts indicate that the plan is to create a citizen reserve such as has already been developed in the two other countries mentioned.

From the foregoing it is evident that the plan for defense developed in Switzerland and Australia has three great advantages over that adopted long ago in Germany, France, Italy, and other countries. These are:

First: The education begins at an early age. The "setting up" process and similar exercises naturally tend to a better physical development of the children in those countries.

Second: The military training, rifle practice, etc., when begun in the early teens and extended at intervals over a number of years gives experience and skill to the future soldier, while he is still continuing at school or in useful occupations at home. This is better than to wait until the young man is eighteen or twenty, and then draft him into the

army for two or three years of continuous service, thus causing an unfortunate interruption in his occupation.

Third: The short terms of service for several years after the training is complete, keep the technical details fresh for a longer time. Many thousands are ready in this way, at any moment, to become efficient soldiers.

How could the Swiss or any system like it be adapted to American conditions? A discussion of that big question is entirely beyond the limits of this small book. It has been possible here to give only the barest outline of the systems in these countries, in order to show the adaptability of the principle to the United States. The details must be decided by military experts, and by legislators who work with such experts and not in opposition to them. Together they could easily frame the necessary law. But it may be asked whether a few encampments of about two months each are sufficient to make a soldier? Yes, and for the evident reason that military education of body and mind goes on half unconsciously for years, and the important art of using a rifle, together with the simpler military evolutions, is learned by boys at an age when they are eager for such instruction.

What would happen if Congress were to adopt the Swiss system for the United States?

Boys from twelve to fourteen would begin "setting up" exercises, elementary drills, and make their first acquaintance with a cadet musket. The most important feature of the new status would be the calling of a very large number of young men from about eighteen to twenty years inclusive into camps for proper training. Although two to three million at that age are nominally available, physical disabilities and various other causes would greatly reduce the actual number.

For convenient calculation suppose the recruits each year number only 250,000. *That is about one half of one per cent. of the entire male population.*

Every young man would learn to answer promptly to his country's call, and learn also that failure to do so would mean dishonor and punishment. He would learn where to go, what to do, and how to do it. His muscular system would be readjusted to the marching and to the handling of a rifle, and he would also have to accustom himself to a new environment and new companions, to camp cooking, and the routine of a soldier's life.

And how long should this quarter of a million of strong young fellows continue their military training? Until they, and the millions interested with them, have gained an idea of what the defense

of one's country means. Taking the average time of different arms of the service in Switzerland and in Australia, we might count roughly on about fifty days as the length of service for each recruit each year, for three or more successive years.

The first mobilization for a couple of months would teach Brother Jonathan a big lesson, and it would take him a good part of the next year to digest his experience, see his blunders, and plan to correct them.

Before these young men were called to the colors again they would be profitably employed in developing the education already gained. At least that proved to be the case in both Switzerland and Australia. When the average man has learned how to do any sort of work, he wants to do it a little better the next time. If he has been assigned or hopes to be assigned permanently to the infantry, cavalry, artillery, to air craft, to bridge building, or whatever it may be, he learns more about it imperceptibly during the intervening months.

When the time for service comes round again there is no such confusion as at first; he knows where to go and something of what to do. His adaptation to the environment is in every way more perfect. Moreover, every one of that large coöperating army of citizens who provide food, clothing, transportation, and the other require-

ments of the soldier has also learned what to do.

This second year the student soldier finds the ranks increased by perhaps a quarter of a million of fresh recruits. Each group gives confidence to the other. During this second year also, the scope of the training would be enlarged, and valuable maneuvers introduced, which unfortunately our regular army has never been able to learn, because of the policy of distributing it in small detachments to many different posts.

The third year the lesson would have become an old story. By that time the student would feel himself quite the master of the situation. Thus within a few years we could easily have a citizen army of one or two million trained men quite prepared for defense against practically any enemy, on the east and the west, and at the south also.

If the recruit aspires to become an officer, examinations must be passed. For if the law were fair and sensible the selection and promotion of officers would not depend upon political "pull" or on the smaller politics of elections by regiments or companies. At first many men would be officers who later would be in the ranks, and many in the ranks would later become officers.

The whole nation would learn in the end by the experience. The organization of each department

would be an education in itself. Arrangements for the feeding, clothing, arming, equipping, and transporting of such a multitude, and for their continued care in health or in sickness, would at once enlist the hearty coöperation of other millions of brains and of hands. Nor would the co-workers all be men. In former wars mothers and sisters played a glorious part—not by the whine of any woman who "did not raise her boy to be a soldier,"—but brave hearts and willing hands have lightened the burden of many a man as he started off to face his duty.

Such a mobilization would show our strength in numbers and probably would prove a humiliating exposure of our weaknesses as well. At least that exhibit of unpreparedness has been made, without exception, in each of our wars. A mobilization in peace gives an opportunity for faults to be corrected. But when war has been declared, or is even imminent, then it is too late; the lessons must be learned, but then they must be paid for dearly in blood and treasure and sorrow.

What would be done with the man who refuses outright to join in military service? Some people are born objectors. Our Civil War furnished its quota, and now in England the "conscientious objector" is vociferous. The sudden development of conscience, especially among anarchists, and nihilists,

may provoke a smile—and for Quakers also in view of the biblical opinions already quoted. This class of objectors is much less common in countries where universal service has long been established. No nonsense is tolerated there. But the question may arise in our country: What should be the punishment for the able-bodied man who simply will not respond to a call for military service? Fine or imprison him? He would only pose as a martyr and protest the louder. Disfranchise him? That would make no difference to a man who indulges in peculiar or fanatical views, who is an anarchist, or who for any reason is mean enough to let other men suffer or die for him. One method remains—*deport him.* That sounds severe. But the punishment fits the crime. After the state has surrounded a young man from earliest infancy with the advantages that come from social order, after it has given him an education, protected him, and has stood ready, if necessary, to defend his life, if that young man, when eighteen or twenty years old, refuses to support the state with loyal service, then we are better off without him. To weed out each year the entire crop of parasitic objectors, anarchists, morons,[1] and the like, would leave the rest of our citizens stronger, healthier, and happier.

[1] Mental defectives just over the border line.

CHAPTER V

MILITARY EDUCATION ALREADY BEGUN

A STRIKING fact today is the rapid growth in the United States of the idea that military education is desirable. This, of course, is immediately due to the war. When treaties become "scraps of paper" nations mobilize, ours being the last even to prepare to mobilize. But independently of the question of defense, there seems to be a general awakening throughout the country as to the advantages of military education to the individual. And fortunately this quickening public opinion finds a certain amount of educational machinery already available.

The trend of public opinion is shown by the recent action of the New York Legislature. During its last session the Welsh bill, making physical training and discipline obligatory, and another, the Slater bill, making military training also obligatory, became laws.

A more far-reaching measure, however, was that of the Senate Committee on Military Affairs which, on the 13th of December, 1915, reported favorably

a bill to provide for the military and naval training of the citizen forces of the United States. This is practically an Americanized form of the Swiss method of military education.

A straw vote taken by the Baltimore *Sun* and by the *North American* (Philadelphia) showed that over 80 per cent. of their subscribers—women included—were in favor of universal military service.

The Chamber of Commerce of the United States of America as a central body represents over 275,000 individuals and firms. According to *Referendum No. 15*, 889 of the voting units were recently recorded in favor of universal military training, with only 56 opposed to it.

As for the opportunities for military education we turn of course first to the professional schools at West Point and Annapolis. These are too well known to require description. That may also be said of schools and colleges which give some military education, as well as fit students for other activities. Among these we naturally recall a group known as the Land Grant Colleges. The Morrill Act of 1862 provided for a grant of land to one college in each State, on the condition that it give military training. The attention paid to this branch is sometimes slight, but the recognition of the principle that public education demands public service in return has been of vast importance, and

many thousand young men have learned that training and education are as necessary to make a good soldier as to make a man proficient in any other profession.

A number of institutes and academies give excellent courses in military training, although these are principally preparatory schools for the colleges. To mention a few would be to make invidious distinctions, but they are well known to educators throughout the country.

Several high schools long ago adopted forms of military training. The success which attended the establishment of military education in Boston, for example, has been set forth in a recent publication by Mr. Hobart Moore. He says: "When first introduced in the public schools, the pupils were few in number; today over fifteen hundred boys receive instruction in this department of the school work."

Officers of the army are detailed as professors of military science and tactics at educational institutions, in accordance with the various acts of Congress. A list of these universities and colleges and military schools, with the name and rank of the officer on duty, has been published by the War Department, and can be obtained on application to the Adjutant-General.

A good example of the successful application of

military training in the high schools is found in Cheyenne, Wyoming, and in other schools of that State.

Early in 1911, Lieutenant Edgar Z. Steever, U. S. A., was ordered to Cheyenne as military instructor in the high schools there. Apparently he was the right man in the right place. When it was proposed to adopt military training in the high schools of Cheyenne, the idea met with violent opposition from labor unions, parents, clergymen, and others. Lieutenant Steever, however, explained that the service would be voluntary, and in reply to his first appeal sixteen boys responded. But the service was made so attractive by the "setting-up" exercises, football runs, wall climbing, and other features which were combined with the usual military drills, that the volunteers rapidly increased, until the plan extended to every part of the State of Wyoming, and 90 per cent. of the high school population of the State had volunteered for the various cadet corps.

By a system of selecting "sponsors" for each squad of boys from among the girls of the various schools, these girls have taken up the part of military education which comes within the scope of their activities. In this way the movement has interested the entire school population.

The plan has apparently become a permanent

part of the educational system of that State. Although Lieutenant—now Captain—Steever was later given other duty, the work has been continued on the same general lines.

A detailed account of this experiment is published in a special circular on "Citizenship Training in Public Schools" prepared by the Bureau of Education.

Colleges and universities have also awakened to the benefits of military training to the nation and to the individual. The growth of the sentiment has been so rapid and so important, that the head of the Department of Statistics of the Bureau of Education, Mr. Alexander Summers, has very recently prepared a table showing what such institutions have accomplished. It is rich in information and suggestion.

It has been found that almost every science, and many courses in languages, history, economics, and similar subjects have their application to military affairs.

The Summer Camps for the military training of college and business men are too well known to require any description. The increase in their numbers and in the number of those attending each camp has been simply phenomenal. The attitude of the leading colleges and universities toward these camps is shown in the following statement:

We commend the camps to the authorities and students of the universities and colleges of the country. We believe that the training and instruction which the men attending receive not only emphasize the dangers and losses of wars lightly and unpreparedly entered into, but we also believe that the training given is excellent, and a great benefit, mental and physical, to those attending.

President John Grier Hibben, Princeton.
President A. Lawrence Lowell, Harvard.
President Arthur Twining Hadley, Yale.
President John H. Finley, New York.
President H. B. Hutchins, Michigan.
Superintendent E. W. Nichols, V.M.I.
President Henry Sturgis Drinker, Lehigh.
President Benjamin Ide Wheeler, California.
President J. G. Schurman, Cornell.
President Edmund J. James, Illinois.
Chancellor J. H. Kirkland, Vanderbilt.
President A. C. Humphreys, Stevens.
President H. A. Garfield, Williams.
President George H. Denny, Alabama.

The spirit manifested in attending these camps shows a fine response from the young, strong, and intelligent men of the country. The only objection to it is that the number is so small. Even if the Summer Camps furnish the country ultimately with fifty, seventy-five, or possibly a hundred

thousand men, that number is small as compared with the quarter of a million or more of much better trained men which the Swiss system would turn out each year.

But the Summer Camps have one great advantage—they give a start, as it were, to the military education of several thousand bright young fellows. With that education and training they could later take high rank in the examinations for officers, if the Swiss system is adopted.

In a word, the people themselves are preparing—in spite of the apathy of Senators and Representatives.

CHAPTER VI

SUPPOSED DISADVANTAGES OF UNIVERSAL MILITARY EDUCATION

IN view of this desire throughout the country for preparation for defense we should examine with a little care—

The supposed disadvantages of universal military education and then its advantages.

(*A*) *Does universal military education mean compulsion?* Yes, for the shirker. For the cowards and for every man who wishes to evade his duty, it is conscription—compulsion. But for the young fellow with loyalty in his heart, with ambition to learn something and be something, universal military education is joyous service. This is not hearsay—it is what I have myself seen in Switzerland. A loyal Swiss, even when away from his country, will return for the service. For example, I remember the son of an eminent colleague and friend, who although he had been for years a very prominent ophthalmic surgeon in Paris, still retained his Swiss affiliations. And

when his son left France to begin active military service among the mountains, it was a day of festival and congratulations. The boy was to become a man.

But let us look this bugbear of compulsion squarely in the face. What is it? Obedience to law—to the Constitution of the United States—nothing more, nothing less. As a government protects the life and property of each citizen, it is his acknowledged duty to render service—to sacrifice life, if necessary, for the defense of that country.

And why should one object to compulsion in paying a legal obligation to the nation, when no honest man objects to compulsion in the payment of taxes or any ordinary debt? To say that compulsory service is "un-American" is to say that to meet any obligation is "un-American."

Every boy is compelled to go to school in early life, for his own sake and for the safety of the country. Why should he not be compelled to go to a school of another kind for the same reasons? We shall see later what are the special benefits to him and to the country. In a word, to object to compulsion is to object to law and order.

"Blind obedience," whatever that may mean, is another phrase for this same objection to military education. But is that anything more than

the obedience rendered by every faithful worker, every day? "Blind obedience" or "team play" is necessary to success in every game, occupation, or business. Nothing is more blind than the obedience which every member of a football team gives to the captain. A modern army is simply a big machine, and each man a cog, just as in successful business in civil life.

(*B*) *Is it contrary to good morals to teach boys the use of firearms?* Does it tend to make them bloodthirsty or to rate human life cheaply? The theory that such is the case has been the basis for many objections to the Swiss or any similar method of military education. But unfortunately the theory is not sustained by facts. On the contrary, facts which are not very flattering to us do indicate that in our country where boys are *not* taught to shoot and where every man is *not* expected to become a soldier—just here the number of murders, principally by the use of firearms, is greater than in any other civilized country, including those where every man is taught how to shoot. The following table (27) gives the number of murders in the United States in one year.

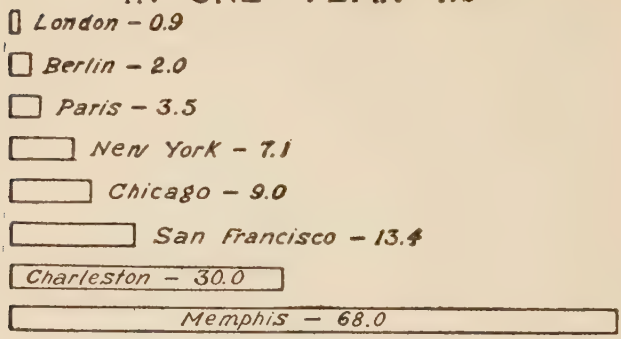

FIG. 9

(*C*) *The fear of "militarism"* is, to many, an insuperable objection to universal military education. It is true that large standing armies are dangerous to the peace of a country where the power to use that force is vested in a few. But in the United States war cannot be declared by a few. That must be done by a majority of the House of Representatives and of the Senate and that action must be ratified by the Chief Executive. Moreover, these men are in close contact with their constituents. Anyone can telegraph or even telephone his Representative or Senator whenever he will. Under such circumstances is it probable that war would be declared except under dire provocation?

Moreover, the danger from militarism is reduced in this country to the minimum by the provision of the Constitution which forbids appropriations for military purposes extending over more than two years.

(*D*) *Conscription or "drafting" has been already made a law* in the United States by the Act of March 3, 1863. In fact, were it not for the additional strength given to the Union cause at that time, we would probably have no Union now. If drafting is "un-American" now, why was it not then?

In every European country, except England, compulsory military service was the rule. But even conservative England has learned the lesson now and a labor leader, George Nicoll Barnes, is one of the strongest advocates of the measure. Does it not therefore seem wise to have conscription in time of peace, when it can be without waste, and with its educational advantages to the individual, instead of trusting to luck in time of war, to call suddenly thousands of men to hurry to the front more for their own slaughter than for service?

(*E*) *The presence of the negro* in America is perhaps a real objection to universal military training. The point deserves consideration, for we have in the United States about 10,000,000 negroes, many of them illiterate and most of

them lazy. In some sections they outnumber the whites.

They have an historic right to fight, although they have been led, almost invariably, by white officers. "The negro troops fought nobly" was a frequent report in the Civil War, and recently they gave their lives for the "peace" waged in Mexico.

Naturally some of them will claim the advantages of military education. But history also shows that the negro has the indolence of Southern races developed to such a degree that as a type he never can cope with the white man—surely not with the Anglo-Saxon.

As the "grandfather clause" in several States has kept the vote, rightly or wrongly, largely in the hands of the whites, it is probable that some similar adjustments would be made concerning the military education of the negroes. Any uprising would be useless, if, as is customary, rifles and ammunition were kept only in well guarded arsenals. At any rate the negroes would be so far outnumbered by whites at the North, that danger of a race war would be negligible.

(*F*) *How about the poor man's family?* A very natural objection to universal service, as indeed to any compulsory service, is that if poor men are taken away from their work for even two months

during the year, their families are left without support. Although comparatively few men are married at eighteen or twenty, the dependents in any family must evidently be provided for. The government could well afford to pay to every wife or dependent a sufficient amount for their necessary support. By giving this temporary pension or bonus to rich and poor alike, the stigma of charity would be removed.

And would not this pension make an enormous budget, and increase proportionately the cost of the army? Not necessarily. The present pay of the American soldier is many times greater than the pay of any European soldier. This objection is easily met, if the pay of the soldiers is somewhat lessened and if the government gives the difference directly to the wives and families of the soldiers.

Or the government could continue the pay of each soldier as it is at present, and also give a bonus to each one dependent on him. Of course, that would add very largely to the yearly budget. Defense of the nation, or even preparation for it, is costly business, but the lack of such preparation is infinitely more costly. Canada, for example, pays her soldiers very much more than we pay ours. England for years imagined that with a large navy she required no army. But that sense of security has cost her for army and navy together

nearly ten billion dollars already, and the expense is increasing at the rate of nearly twenty-five million a day. It would have been vastly cheaper to pay conscripts for years before, and their families in addition, than to accumulate this debt. The best investment she could have made would have been universal military education.

CHAPTER VII

ADVANTAGES OF UNIVERSAL MILITARY EDUCATION TO THE NATION

WHEN we looked the "bugaboo" called compulsion squarely in the face we found that it was nothing to be afraid of after all. It is simply the payment of an obligation—obedience to law. Closer scrutiny shows that conscription—compulsion, if you will—is really an advantage both to the nation and to the individual.

For the nation it means justice, efficiency, economy, and peace.

(*A*) *Conscription is thoroughly just and impartial.* Each able-bodied citizen may be called, whether rich or poor. As the Union League Club has recently expressed it:

> There is no reason why one able-bodied American should expect another able-bodied American to do his fighting for him. There is no reason why one selfish household should be allowed to keep its sons out of training, and out of fighting if war should come, while the brave sons of other braver and more patriotic families send their sons to the flag.

If we mean it when we talk about "equal rights for all and special privileges for none," we should make our national defense democratic in fact as well as in campaign oratory, with patriotic service from all who are physically fit to give it.

The *Evening Bulletin* of Philadelphia, March 4, 1916, says:

Universal military service for all able-bodied men is an effective answer to the assertion occasionally heard that if the United States should find itself in a defensive war the burden of fighting would be thrown on the workingmen.

Or, as Governor Whitman has said:

It is idle to talk of peace in terms of non-resistance. The volunteer system is inefficient, stupid, unfair, and undemocratic, and has been a failure wherever tried. It is to be condemned. One man enlists at the sound of the bugle, while another turns a deaf ear to his country's call, and as a result the brave bear the burden of defense while the cowardly and indifferent go free.

(*B*) *Universal military education would be efficient.* It would give us the maximum number of men in the minimum time.

Perhaps the most authoritative estimate of the number of young men who could begin military training at once is furnished in the testimony given by Mr. Alexander Summers (29), Chief of the

Census Department of the Bureau of Education, before the Committee on Military Affairs, in February, 1916:

The number of young men who will reach the age of eighteen in the year 1916 exceeds considerably 1,000,000. It would be a tremendous undertaking to give even a useful minimum of military training to these young men, to say nothing of the million reaching nineteen, the million reaching twenty, and the other eight and three fourths millions not yet thirty, and leaving out of the question the remaining 10,835,-442 men under forty-five.

He gives the following table:

Approximate Distribution of the Estimated Male Population, 18 to 44 Inclusive, Jan. 1, 1916, According to Age Groups.

Groups	*Numbers by groups*	*Numbers by each age of group*
18 and 19	2,030,515	1,015,258
20 to 24	5,058,198	1,011,640
25 to 29	4,687,369	937,474
30 to 34	4,038,418	807,684
35 to 39	3,719,596	743,919
40 to 44	3,077,428	615,486
Total	22,611,524	.....
18 to 29	11,776,082	.....
30 to 44	10,835,442	.....
Total	22,611,524	.....

Continuing he says:

In my opinion the cadet army will be the spinal column of our army of preparedness, because it will furnish strength to all parts of the organization. It will be an army of young men of the highest character, educated men, many of whom shall have had some previous military training in the colleges, schools, and the National Guard. Most of them will be under thirty years of age, preferably single men from eighteen to twenty-five.

There are in this country more than 50,000 men not yet twenty-five years old who have graduated from colleges within the last few years, and 125,000 more who have left college before graduating. There are out of school, 200,000 young men who have graduated from the public high schools in the last five years, not including 100,000 more who went on to college. The private high schools have added about 30,000 graduates to our citizenry within the five years, not including 20,000 more who went to college. Here then, is an army of 405,000 young men under twenty-five, made up of college graduates, ex-college students, and high school graduates. This does not include that greater army of 605,000 young men who have left the public and private high schools before graduating, within the last five years. The two groups combined give you a latent force of 1,055,000 able and intelligent young men, and the force is increasing year by year.

It should be remembered also that very young men—even boys—have played a most conspicuous and honorable part in the history of our country. This is shown in diagram (Fig. 10).

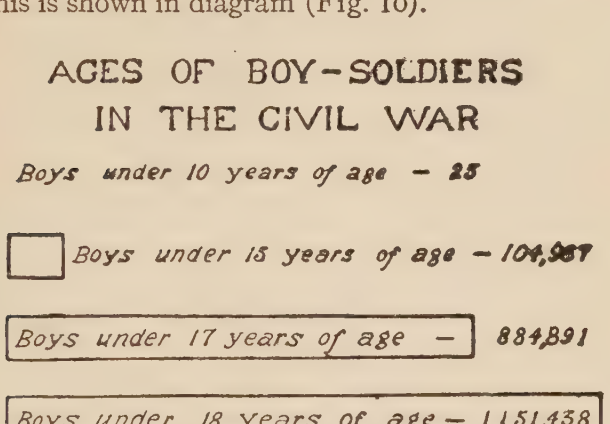

FIG. 10.

(C) *The Swiss System would be economical.* According to the reorganization law, *if* a sufficient number of volunteers can be obtained, we *may* have at the end of five years a minimum peace footing of 191,000, or a maximum peace footing of 206,000.

It appears (22) that for the army the annual per capita cost, all ranks considered, is.....$	893.26
Or a per capita cost per day of all ranks about.....	2.45

The annual cost of those men would be	$170,612,660.00
But suppose a law for universal service gives 250,000 recruits to serve about 50 days, or 250,000 × 2.45 × 50=	30,625,000.00
And the standing army for 365 days=	170,612,660.00
Thus the total cost the first year would be	$201,237,660.00

For the next two years there would be an increase in cost of about $30,000,000 a year, for each additional 250,000 recruits. Moreover, during the fourth and fifth years a still further expenditure, but much less in proportion, would be necessary, for the soldiers already educated who would return each year for a short annual training of one or two weeks. During these first few years the yearly budget for the army would of course be considerably larger than at present. But by the end of the third or fourth years, we would begin to "graduate" annually at least a quarter of a million thoroughly trained soldiers who would remain civilians, but would be ready to respond to a call at short notice. As a result, our regular army could be decreased each year a corresponding amount, until it stood at about 60,000 men, the number which experience has shown to be absolutely necessary to man the forts, protect our in-

sular interests, and furnish a mobile force for minor emergencies.

This is not a theoretical proposition. It is what has occurred in Switzerland, and rough estimates show that within ten years an annual saving of from twenty-two to twenty-six million dollars or more would result. Meanwhile, we would have accumulated a trained citizen army of over a million and a half men and would be adding at least a quarter of a million yearly to that number.

(*D*) *Universal military education would be our best guarantee of peace.* The stronger we are, the more will foreign nations hesitate to attack us, and the larger the proportion of citizens who must respond at once to the call to arms, the more reluctant the nation would be to issue that call.

A man who knows that immediately on the declaration of war he will be obliged to give up his occupation, leave his home, shoulder his rifle, face death and perhaps never return, will naturally wish for peace. He and his friends would make their wishes known to their Congressman, and if there were a few millions of such men, each with a vote, instead of one or two hundred thousand professional soldiers who ordinarily do not vote, the wealth and influence that belong to such a reserve would apparently be a strong guarantee of peace.

CHAPTER VIII

ADVANTAGES OF UNIVERSAL MILITARY EDUCATION TO THE INDIVIDUAL

IN considering the relation of any kind of education to the individual, we must understand just what we mean by the term "education," and see what opportunities of that kind Americans have without the introduction of military methods. If our system is already the best, evidently it is useless to experiment with it. If it is not, we should see what the defects are, and whether military methods will tend to correct them. That is to be our plan in studying this aspect of the subject.

First of all let us agree on one or two terms, the misapprehension of which causes endless confusion. The word "education" is used here in the modern sense, according to which lessons and examinations are insignificant details—simply means to an end. We are to understand that this complicated thing called education includes the development of the pupil in at least four different directions. These are:

First: **Health—Physical development.** To make any machine do its work, the first requisite is to keep it in as perfect a condition as possible.

Second: **Knowledge**—that is, an acquaintance with one's environment and a liberalizing of the mind.

Third: **Character**—as shown by self-control and self-sacrifice. It means deference to elders—obedience to law. It is courage, clean thinking, clean living. It is the development of the moral qualities which are common to all religions, without regard to creed.

Fourth: **Efficiency**—for self-support and useful living. This is not a development entirely physical or mental or moral. It is rather a combination or equal balance of these qualities with the addition of still another—energy. It means the modern tendency, in the education of girls as well as boys, to prepare each one to earn a living, if necessary, or at least to share in the responsibilities of family life.

A few teachers may object to some details of this definition of education. But as the vast majority do agree concerning it we may therefore consider these four elements as parts of a standard by which to measure any system. We shall have occasion later to refer to this standard. Let us see also just what we are to understand by the word

"military." In one sense it is clear enough; the dictionaries say, in substance, that it is something pertaining to soldiers, arms or war. But the word has also a broader meaning; it includes the virtues which should characterize the soldier. In this better sense "military" includes love of country, courage, honor, self-sacrifice, also promptness, alertness, exactness, together with obedience and self-control. This broader meaning is the one selected for it here.

Moreover, although we usually associate the military idea with men, women also have often afforded conspicuous examples of the military virtues. Evidently, therefore, military education may play a part, and a very important part, in the rearing of a young woman.

This leads us to note the *difference between military training and military education.* The term "training" refers rather to exercise for physical development, together with a knowledge of the manual of arms and details of tactics. In military education, on the other hand, there may be little or no such training; it is more of a mental process. Thus boys may have military training and education, but girls the education only.

Another term used loosely is "militarism." This word likewise conveys two meanings. It is

"the addiction to war or military practices," and also "the maintenance of national power by means of standing armies." Evidently the one is hateful, the other the custom of every nation. All right-minded persons condemn "addiction to war," but every nation maintains its power by means of a standing army. One is the use of power, the other its abuse.

The term "universal" or even "compulsory military education" does not mean that every young man will inevitably pass through a period of military education and training and later become a member of the reserve army. There would be various reasons for exemptions. Until the physical standard of the nation improves, physical disabilities would deduct more than 50 per cent. Domestic responsibilities would claim another group, as only sons of widows are usually exempt, even in countries where the usual form of military service is demanded. Certain employees in munition factories, or skilled workmen in various other departments, are really public servants, and so become part of the reserve force of the nation.

At this point a word of explanation is also in order. For if what follows seems to be an arraignment of our public schools, it should be understood that the faults described are not uni-

versal, but it is safe to say that the imperfections here referred to will be found in the vast majority of schools, especially those in country districts.

It should also be understood that the imperfections mentioned are very seldom due to faults of the teachers. They are a devoted and faithful class of men and women, and apparently their opportunity for exerting good or bad influence is greater than in any other calling. Moreover, those in authority, like superintendents of education, and especially those who have been teachers, and who are in official positions in the State or Federal Departments, are for the most part devoted servants of the public.

The underlying difficulty is with the system of separate State government which has come down to us practically unchanged for more than a hundred years.

Each State holds with tenacity to its sovereign right to direct its own system of education, resulting in endless confusion. This leads us to inquire more exactly concerning—

Education in the United States.

First of all we should recall the important fact that *in the Constitution there is no provision for education.* Therefore we have no central supervision of it (31). We have a Bureau of Education in the Department of the Interior, whose

function it is to collect and publish data concerning the subject, but each State educates its citizens or neglects them, according to its own ideas. This Bureau states that in 1911, in the schools and colleges, there was a total enrollment of somewhat over 21,000,000 and the annual cost of education in the United States was over $700,000,000. All of the States agree in a nominal classification of schools into three groups:

(*a*) Primary schools, including kindergarten, primary, and grammar grades;

(*b*) Secondary schools, including high schools and occasional vocational schools; and

(*c*) The higher institutions, including technical and professional schools, colleges, and universities. In reality, these distinctions are not always maintained. In the cities, the grading in the lower schools is fairly accurate, but in the country districts young men and women may be found pursuing primary studies. In higher education, also, there is great diversity, the colleges and universities of one section corresponding about to the high schools of another. Attendance also varies greatly, both with the age of the pupils and with the conditions prevailing in a given State. The period of prescribed study ranges from four to nine years, while the school year varies from two months to ten.

Theoretically, attendance is compulsory, but in many States the law is often broken, or almost ignored, for various economic reasons.

Not only is there this curtailing in various localities of the number of days which the child attends school, but throughout the entire country there is a rapid decrease in attendance with advancing grades. The younger the children, the readier are the parents to have them taken care of by the teachers, but as the child grows older his services become more and more in demand, or he develops habits of carelessness and truancy.

The efficiency of a school system can be measured largely by the number of children of a given age who attend school, as compared with the number of the same age who do not.

Comparisons here would lead to a long digression, but the fact is that the United States in this respect is behind England or France, and far behind Germany.

With this understanding as to what the elements are which together constitute education, and of our lack of uniformity in instruction, we are prepared to ask how the results obtained by our present methods compare with the standards of excellence which we have agreed upon, and how a military factor would affect those methods. Let us consider those standards in order.

First: **How does our present school system affect the health of pupils?** In attempting to answer this question we must understand what the deformities or diseases are which school life may produce, directly or indirectly.

These abnormal conditions may be divided into three groups;

(*A*) *Deformities*, with resulting diseases due more or less *directly* to school life. In this group we have, especially,

(*a*) spinal curvature with
(*b*) nearsightedness.

(*a*) *School life tends to develop spinal curvature.* This is so fully described in every standard work on school hygiene that it is unnecessary to dwell upon it here.

Orthopedic surgeons, and all who have studied this subject (33–34) agree that it is present in only a small percentage of children of kindergarten age. But as the school age increases, the frequency and degree of spinal curvature increases also, so that by the time the students are sixteen to eighteen years old, spinal curvature is present in 20 to 23 per cent., or more, of the entire number.

In the greater number, of course, it is of no practical importance, but in a certain percentage it amounts to much more than an inconvenience.

It results in a more or less contracted thorax, and by pressure on the abdomen may, as Martin has shown, interfere also with the functions of the ovaries.

Heredity, unsuitable school furniture, and the carelessness of the pupil may be contributing causes to this condition, but the fact is that it exists in this very considerable frequency.

(*b*) *School life tends to develop nearsightedness* (35). Examinations of the eyes of children show that in the first years of the primary schools only 2 or 3 per cent. are nearsighted. Even in the primary schools the number of nearsighted children increases, and this increase continues in a fairly constant ratio during the school or early college life. There are but few schools containing several hundred pupils in which at least 14 to 16 per cent. of them are not measurably nearsighted by the time they are eighteen years old.

Nearsightedness is a disease—often a disease of importance. The globe of the eye is enlarged, changing its form from practically a sphere to an ellipsoid. Sometimes the internal white layer, or retina, becomes separated from the black layer or choroid behind it, and blindness results—a blindness practically incurable. It is true that these cases of "progressive" or "malignant" myopia are rather rare, but it is also true that even a

moderate degree of nearsightedness is a decided handicap.

In the stooping posture, the blood enters the eye by gravitation more readily than when the head is erect. As the veins from the globe pass obliquely backward through the external coating of the eye, the blood can not flow out as easily as it flows in. This partial obstruction, added to the force of gravitation, tends to cause a kind of stagnation of fluids in the eye. That in turn produces a distension of the globe, and a distended eyeball is necessarily nearsighted, just as a camera becomes nearsighted when the glass plate is drawn backward.

It is evident that much of this spinal curvature and nearsightedness is due to bad posture in early life. Even when tuberculosis, inherited syphilis, and other such diseases are present, careless posture is an important secondary cause. Anyone who will visit schools, especially for the younger children, and in the small towns, will be impressed with the insufficient stress laid upon posture. It is bad—very bad. No argument is required to show that if shoulders are allowed to stay rounded and spines to bend crookedly for hours at a time each day, in growing children, the bones and ligaments will take shape accordingly. As the twig is bent the tree is inclined.

In a list of the conditions which result more or

less directly from school influences, we might with propriety include imperfect muscular coördination and slow time-reaction. When these two factors are present in the same individual, they produce the specimen described by ex-President Taft as "the slouch." But as "slouchiness" is not recognized as a disease, we will confine our attention at present to the important fact that *spinal curvature and nearsightedness are in a considerable proportion of cases directly the result of school life.*

The correction of these deformities can be accomplished in two ways. The first is to improve the methods already in vogue, the other is systematic military training. Suitable school furniture, shoulder braces, knapsacks in which to carry books, marks for improvement in posture, and similar devices may accomplish something toward lessening spinal curvature and nearsightedness. But any or all of the methods of this group have proved rather unsatisfactory.

A second method of obtaining good posture is by appropriate military training. This means not only the usual setting-up exercises, but physical development of the entire body. It also corrects imperfect muscular coördination and slow time-reaction—that is, it develops alertness, promptness, and exactness—the opposite characteristics of the slouch. Every teacher of school hygiene appre-

ciates the value at least in this respect of the Slater and Welsh laws recently passed by the New York Legislature, and which probably will be adopted by other States.

(*c*) *Is military training the most efficient means of correcting the unhealthy tendencies of school life?*

The word-battles over this point would fill volumes. It is undoubtedly true that muscles can be exercised just as well by lifting dumb-bells and swinging Indian clubs as by handling a rifle. The fact is, however, that all forms of exercise after a time become tedious, and when that point is reached, the gymnasium exercise, which is usually voluntary, is abandoned. But military training, which is usually obligatory, has to be continued. If for this reason only, the results with the latter method are the better. The test is to compare a hundred average men in a college gymnasium with an equal number of cadets at Annapolis or West Point at the end of their first or second year. Such a comparison usually ends discussion of the relative value of the two methods.

(*d*) *The physical education of the average high school or college student is now imperfect.*

The present system develops a few athletes, but does not sufficiently provide for the health of the large majority. According to Professor Sargent (36):

At Harvard University about one hundred men out of four thousand are in condition to participate in the final athletic contests; yet it requires the combined services of some fifty men and an expenditure of over $50,000 to take these picked athletes through the season's training. Only three men are employed at Harvard to look after the physical instruction of the two thousand that attend the gymnasium, and the cost of maintaining this institution, including salaries, is less than $12,000 annually.

Without doubt in many similar institutions more effort is made to win a few athletic games than to improve the health of the average student.

The skill and strength which we delight to see in baseball and football should not be underestimated; but the present system tends to unequal physical development, so that restrictions should be placed on many students who are ambitious to excel in sports. Athletes often develop certain parts of their bodies at the expense of the rest. Several of the best football players are round-shouldered, and have no idea of how to stand or walk properly. They are masses of ungainly muscle—statues of Hercules with a bent back.

Let us now glance at a second group of abnormal conditions which threatens the health of pupils.

(*B*) *Diseases not directly the result of school life, not contagious, and not dangerous to life.* Some of them are:

Diseases of the

Eyes
Ears
Teeth
Nose and throat
Nervous system
Rachitis
Tuberculous spine
Flat feet
Etc., etc.

These are, unfortunately, so common as to require no comment in themselves.

The third group of abnormal conditions which threatens the health of pupils is:

(*C*) *Diseases not directly the result of school life, but contagious and several of them dangerous to life.* Some of them are:

Tuberculosis
Diphtheria
Scarlatina
Measles
Small-pox
Chicken-pox
Etc., etc.

During the year 1913, for example, the number of deaths of persons between five and twenty years from tuberculosis, diphtheria, scarlatina, and measles aggregated 19,054.[1] That is the report of the dead; the wounded, those blind and deaf from scarlet fever, and those paralyzed by diphtheria being left out of account. Of course the schools are not to blame for even a majority of these deaths. But the laws providing for quarantine and for the closing of schools in time of epidemic indicate the importance of authoritative and uniform medical inspection of school children, and it is certain that a large percentage of these fatal diseases *are* contracted each year in the schools.

(*D*) The *frequency* of these deformities and diseases is appreciated only by sanitarians and by some teachers. The records, it is true, can be found in the school reports of the larger cities where medical examinations are systematically conducted, but such reports too often go from the hands of the postman straight into the waste basket. Therefore, estimates are apt to appear exaggerations. One of these is here given as a sample. This list does not include the contagious diseases.

[1] *Mortality Statistics*, p. 354.

Estimate by Dr. Thomas D. Wood, of Columbia.

Of about 20,000,000 pupils
1,000,000 have flat feet, spinal curvature, or other deformities sufficiently grave to interfere with health.
1,000,000 have defective hearing.
5,000,000 have defective vision.
6,000,000 suffer from mal-nutrition.
10,000,000 have defective teeth.
6,000,000 have adenoids, enlarged tonsils, or cervical glands needing attention.
15,000,000 children have physical defects sufficiently grave to require attention, and seriously threaten health.

It will be observed at once in this estimate that the number of afflicted pupils considerably exceeds the number attending school. That simply means that many children have more than one disease.

(*E*) *The standard of health of the average American is apparently low.* This is not surprising in view of what we have already learned. For if school-life gives to a considerable number of children spinal curvature or imperfect vision, or if lack of proper medical examination of pupils tends to the development of non-contagious diseases among many millions or to the dissemination of contagious diseases among thousands—taking all

of these factors together we would expect them to lower the average health of the nation.

This natural conclusion is supported by facts. In 1914, 53.11 per cent. of the applicants for the navy were rejected on account of physical disabilities, and 56 per cent. of the applicants for the army were rejected for the same reason. This from over 250,000 examinations. During the year 1915 only 9.31 per cent. of the applicants of the United States Marine Corps were found physically fit. It should be remembered also that perfect health is not demanded in any branch of the service. That condition, at least in America, is comparatively rare. Thus it is stated that an examination of 1256 students of the University of Pennsylvania showed only 92 or .073 per cent. to be physically perfect. Does not this condition seem worthy of some consideration? (Note G)

It does not mean necessarily a gradual physical deterioration of the nation. It is doubtful if that exists, in view of the progress in preventive medicine. But it is certain that some millions of children have physical defects which are allowed to pass uncorrected or even unnoticed, and this culpable negligence is perhaps the most important reason why the standard of health of the average American is apparently low.

It is true that in some other countries about one

half the recruits are rejected for physical disabilities *and* other causes. Such figures, therefore, concerning any nation cannot be considered conclusive. But from such data as can be obtained, it must be inferred that the physique of the average American must be classed as decidedly imperfect.

Nicholas Murray Butler has summed up the case for better hygiene in schools and colleges when he says:

> No amount of thundering eloquence on the value of the ancient classics, no emphasis on character as the sole end of education, can make amends for our failure to study the facts dealing with the physical and physiological elements in education, and for our delay in applying them.

(*F*) *The establishment of universal military education could be the basis of an efficient means of improving school hygiene and the health of the nation.* As this relation between military education and public health is not apparent at first glance, the intermediate links in the chain of facts must be made clear.

(*a*) Sanitarians agree that, in spite of their best efforts, comparatively little progress has been made in school hygiene proper, except in cities and large towns, aside from progress primarily in medicine and surgery. This means a continuation of the same old story of deformity, disease, and

death of the young, and the persistence of defects which tend to physical imperfection.

(*b*) Sanitarians also agree that one of the most efficient means to advance school hygiene and to improve the health of the nation would be a perfected system of medical examination of all school children. Experts agree, in general, that the examiners should be able to establish quarantine or provide isolation when necessary. When deformity or disease is diagnosed, they should recommend to the parents suitable treatment by the family physician or the public health officer. But if subsequent examinations show to the examiner that the parents have wilfully neglected their children, then on complaint to the proper court suitable fines or other punishment should be imposed.

Federal control of this system would be necessary to free it from local jealousies or political influences and make it *authoritative*, *uniform*, and therefore efficient.

There is every reason to suppose that the system would work as well in this country as it has elsewhere. Millions of children would each year be saved from deformity, discomfort, and pain, parents would be spared expense for medical treatment, each year also probably the lives of several thousand children would be spared, and in

a single generation the standard of health of the entire nation would be raised to a higher level.

(*c*) All those who have studied the question agree also that there are two reasons why we have no such authoritative and uniform system of medical examination of school children.

One is our fear of "militarism." That bogey causes untold suffering to millions of children and the death, without doubt, of thousands annually.

The second and more important reason is, as already stated, that *the Constitution of the United States makes no provision for education.* Medical examination, under Federal direction, of school children is therefore impossible, and always will be impossible *as an educational measure.*

(*d*) But the Constitution does give ample power to the President and to Congress for national defense. It provides for compulsory service, and the implied powers are ample not only to preserve the health of the soldier, but also to conserve the health of the future soldiers and of the mothers of soldiers. But we must first have a law creating the universal service. After that, a law for the medical examination under Federal control of school children can follow as a *military measure.**

Indeed, the machinery for any such arrangement is already in existence. The United States Public Health Service is organized on a plan which admits

* Note H.

of enlarging its scope, or the creation of an auxiliary branch especially for the examination of school children. For this, it is only necessary to have additional funds and authority by act of Congress. The officers of such a central body would undoubtedly associate with themselves the officials in different States who are already acting as public health officers. A comparatively few physicians, who give their entire time to school hygiene, would thus supervise the system and make the examinations of doubtful cases, of older boys in the schools and of young men in college. Women physicians would have charge of the older girls and young women, while a large part of this work, especially for all small children, might be in the hands of competent trained nurses. Such nurses are already at work in large centers and are well organized. Most of these examiners, especially in rural districts, would travel from one point to another within the region which they supervise. In a word, essential parts of the system already exist. They only need to be organized, standardized, and given life. The cost of good health would be only a small per cent. of the present outlay for preventable physical defects.

A very natural objection to any such scheme is that Federal authority might conflict with the efforts of State or local Boards of Health. This

would be unfortunate, as each of these different groups of sanitarians agree as to the necessity of efficient medical examination of the pupils. But it seems altogether possible that a law could be formulated which would give to the Public Health Service, or to some other Federal board, the power to establish certain standards for the inspection or examination of pupils in all schools throughout the country. In localities where such work is already well done it would be only a matter of form for State or local authorities to comply with Federal requirements. When, however, those State or local boards neglect their evident duty in making proper inspection or examination of school pupils, then such authority would be of infinite advantage to the health of these neglected pupils.

In spite of every objection, it seems therefore that the establishment of universal military education and service could be the basis of an efficient means to improve school hygiene and the health of the nation.

(*G*) *Apparently it becomes the duty of every teacher, superintendent, and commissioner of education to advocate universal military education.* It is axiomatic that the duty of an educator is to educate. He is appointed for that, and for that only. Personal preferences have no place if they conflict with education, provided the method is legal.

Now we have already agreed that the promotion of health is one of the most important functions of education. If therefore it is true, as seems to be the case, that the establishment of universal military education would form the basis for a most efficient means of improving school hygiene, it would seem to be the duty of every teacher, superintendent, and commissioner of education to advocate such education.

(*H*) *Summary concerning health.* If therefore we first separate into groups the different abnormal conditions which may injure the health of pupils, we find that military education is beneficial for each. For the first group it is undoubtedly the best; for the second and third groups it offers, in an indirect way, the only practicable solution of one of our most important problems. That problem, repeated still once more, is simply this:

On the one hand there is the *certainty* of these millions of deformed and diseased children, with the unnecessary death of a large number of them, and a more or less defective race of Americans constantly coming to maturity. On the other hand, there is the *possibility* that the bogey called "militarism" may, some time in the distant future, appear as an outgrowth of universal military education. Which shall it be?

Second: **Is the diffusion of knowledge as complete as it should be?** To answer that let us see:

(*A*) *What part of our population does not even know how to read or write?* The following table, giving the percentage of illiteracy in the United States and in the principal European countries, is instructive (3).

Country	*Illiterate Per Cent.*	*Basis*	*Year*
America			
Native white, native parents	3.7	Population over 10 years	1910
Total popul'n in Continental U. S.	7.7	Population over 10 years	1910
Foreign-born white	12.7	Population over 10 years	1910
Bulgaria	65.5	Population over 10 years	1905
"	25.4	Army recruits	1909
France	14.1	Population over 10 years	1906
"	4.3	Army recruits	1912
German Empire	0.05	Army recruits	1912
Greece	57.2	Population over 10 years	1907
"	30.0	Army recruits	
Prussia	0.02	Army recruits	1910
Roumania	60.6	Population over 7 years	1909
"	41.0	Army recruits	1911
Serbia	78.9	Population over 11 years	1900
"	43.4	Army recruits	1911
Sweden	0.2	Army recruits	1911
Switzerland	0.3	Army recruits	1911
United Kingdom	1.0	Army recruits	1903–1904

It shows that the United States has an average of 7.7 illiterates, or more than either of the other two

great Protestant countries, namely, England, 1 per cent. and Germany 0.05 per cent. *We have 3.7 per cent. illiterate native whites born of native parents.* These facts speak for themselves.

(*B*) *In practically every country the illiteracy among recruits is less than among the rest of the population.* In other words, for certain reasons, these recruits, either before their military service or while still recruits, do rise above the lowest grade of intelligence. In some countries this difference is very marked, as, for example, in Bulgaria, France, Greece, and Serbia.

The evident conclusion is, that military service, prospective or actual, tends to raise the standard of intelligence and to contribute very materially to the diffusion of knowledge. The table shows that illiteracy can in this way be decreased 20 to 30% or more. If it does so in other countries why should not universal military education do the same in the United States?

The reason for this fact is not difficult to find. Men are anxious to obtain at least this minimum amount of education, partly from pride, and partly because of the consequent betterment of their condition when matched with their fellows in the Army. And there is a world-wide difference between knowing nothing, and knowing how to read and write even a little.

(*C*) *The "liberty" to stay away from school makes the knowledge possessed by the average American much less than it might be.* Prof. Frederick William Roman says: "*In Germany the children go to school two and a half days to every day our children go.*" There

the average attendance is 213 (days) each year for all children between six years and fourteen years of age. This includes country children as well as those in the cities. Besides that, after fourteen years is reached, the attendance upon an industrial or commercial school is required. That extends until the age of seventeen. That applies to about nine tenths of the German children. The other one tenth attend the higher schools, which prepare for the universities and higher technical schools.

On the other hand

More than one half of our children do not go beyond the sixth grade even now, and there is no additional schooling for them after that.

If democratic Switzerland can teach us how to raise and keep a citizen army at a low cost, and autocratic Germany can teach us how to lessen our illiteracy and increase our knowledge, why should we hesitate to learn from those countries?

(*D*) *Our schools are not sufficiently democratic.* A private school is, naturally, for the children of

well-to-do or wealthy parents. So is a school situated in a fashionable district of a large city, although it may be a public school. If situated in one of the poorer districts, it is likewise a class school. Even the "little red school house" receives only about one class of pupils, usually the children of farmers. In other words, the only children who are under entire democratic influences are those who attend public schools situated, as it were, on the borderline between the rich and poor districts in a large city or those which are in the smaller cities or the larger towns.

This separation of the pupils into social groups at an age when their friendships are forming does not tend to the cultivation of democratic principles. The boys, especially, grow up with an insufficient knowledge of each other which later hardens into class distinctions.

On the contrary, universal military education, by the annual encampments and otherwise, would bring together all classes, high and low, rich and poor, Americans, Germans, Italians—all, and weld them into a more coherent nation. This would be one of the highest and best results of that form of education. When men live together, eat together, and make ready, if necessary, to die together, each one condones the shortcomings of the other, and mutual respect ripens into friendship.

A single example illustrates the principle. In the summer of 1915 there appeared at the Plattsburg Camp a young fellow full of enthusiasm for the training. But as his parents were rich and he their idol, they also came to a hotel near-by. It was not long before a messmate had dubbed the young man "Florence." So "Florence" he became and "Florence" he remained. In one way it was a weird experience for the scion of a wealthy family. But the education which he received during those few weeks was more enlightening to him and more beneficial than any four years of his previous instruction at school or college. He saw his inferiority to those about him; and they realized later, in spite of the misfortune of his petting, that in reality he was a first-rate fellow with as much manly stuff as any of them. This democratic element in education can not be obtained from books or schools. The best cure for illiteracy, ignorance, and snobbishness is universal military education on the Swiss plan.

Third: **Is character adequately developed?**

(*A*) *Deference to elders is often neglected.* It is impossible of course to show this by figures, but it seems fair to accept the testimony of observers who have had a good opportunity to judge the behavior of children in this and in other countries. Their verdict appears to be almost unanimously

adverse to us. In more than a dozen trips to the continent, and in several years spent there, I have yet to meet a single traveler of unbiased mind who would not heartily agree that French, German, and English children excel our own in deference to their parents and their teachers.

If the pupil in even a good American school is questioned by the teacher, the response is not always, "Yes, Miss Brown," "No, Miss Smith," but it may be "Yes" and "No" or even "Yep" and "Nope."

In a German school, on the contrary, when a boy is spoken to, he immediately stands at "attention," his answers are prompt, direct, and his obedience immediate.

This is a small point, it is true, but it is an indication of an important principle in the character building of the child.

As the American boy grows older, the liberty which he enjoys is apt to show itself in "horse play" in the recitation room, and it is a decided factor in the formation of the type which ex-President Taft has described as the "College Slouch." He speaks of that specimen of humanity as "it" and says (38):

One of the weaknesses of our present life is the fact that in the family and in the education which we give

our children at home, we coddle them. We permit them to take the line of least resistance. We deny to our children the great and indispensable good that comes from discipline. Character is formed by the practice of self-restraint and self-sacrifice, by overcoming obstacles.

The pernicious effect of this parental weakness is not therefore on the children of the poor, whose fight for an education itself trains them in the necessity for prudential virtues, for self-restraint, and for self-sacrifice.

Together with this coddling which the American child receives, in many cases the teacher lays too much stress on rewards and punishments and too little on the principle of doing right simply because it is right.

(*B*) *America ranks high among nations in intemperance.* The average Frenchman drinks about one and three quarters of a gallon of spirits a year, an average American about one and a half gallons, the average German is about his equal (21). But both France and Germany are grape-growing countries, and their alcohol is taken much diluted and for the most part temperately. Our drinks are often taken "straight" or in a form that leads to intemperance. The other great nations are now considerably behind us in the consumption of spirits, even Italy. This tendency of ours

towards intemperance is evidence, as far as it goes, that if self-control is taught in the schools, the lesson is not sufficiently impressed upon pupils to make it last during adult life.

(*C*) *America leads all the great nations in frequency of divorce.* According to the Bureau of Census, 1909 (3—for 1914, page 277), we have seventy-two divorces for every 100,000 of the population. This is more than twice as many as any other country except Japan, England, for example, having but two and Scotland four among the same number. Nor can the divorces in America be properly compared with those in Japan, for there the old custom holds, to a great extent, according to which the husband is permitted for trivial reasons, to send his wife back to her family.

Whatever the cause or causes may be in America the fact remains concerning divorce as it does concerning intemperance, that if self-control, justice, and obedience to duty are taught in the schools, the lesson is not sufficiently impressed upon the pupil to make it last during adult life.

(*D*) *America also leads other nations in disobedience to law.* This unfortunate fact is recognized by authorities on criminology. It is not flattering to us, but in order to correct it, we must first recognize it. We have already seen that homicide is more frequent in several of our

American cities than in London, Paris, or Berlin, and in our country as a whole homicide is more frequent than in any European country. Indeed, we rank next to the South American republics and Mexico. (See C. Bernaldo de Quiro's *Modern Theories of Criminology*, page 105.)

Dr. Arthur McDonald says in his *Abnormal Man*, Washington, 1893, page 88:

> In all Europe the average number of murders each year from 1881 to 1887 was fifteen thousand. In the United States the proportion to population is much larger.

Albert H. Currier on page 83 of his *The Present-Day Problem of Crime*, Boston, 1912, says:

> We [the United States] lead the world in crime, and in the immunity of our criminals from punishment because of the defects in our laws.

(*E*) *The frequency of crime is also apparently increasing.*

August Drahms in *The Criminal: His Personnel and Environment*, N. Y., 1900, says on page 254:

> As compared with the United States, while the latter's population has increased 24.85% in the decade mentioned, between 1880 and 1890, the English population in the same period has increased but

11.48%, but her criminal roll has gone down 12.40% as against an increase of 40.47% in the States. Also, while the number of serious offenses in the latter country has appreciably increased, that of England has decreased materially.

Henry M. Bores, page 2 of *Prisoners and Paupers in the United States*, 1893, says:

In the last decade, with an increase of 24.5 per cent. in population, the number of inmates of our penitentiaries, jails, etc., have increased 45.2 per cent.

Thomas Speed Mosby in the preface (page 3) of his *Causes and Cures of Crime*, St. Louis, 1913, says that:

the cost of crime in the United States now amounts to one third the total cost of the government and the burden is yearly increasing. Crime is seven times more prevalent in this country now, in proportion to population, than it was sixty years ago.

(*F*) *Loyalty and self-sacrifice are apparently lessening in America.* In the days of the Revolution or of the Civil War Americans did not lack courage, but the last year or two has revealed the presence in our country of a very considerable number of men of a different spirit. With them

the all-important aim is peace—safety of purse and of person. This is shown by the very slow enlistment of volunteers in response to a recent call of the President for 20,000 troops. It is shown also by the apathy of officials at Washington, of part of the clergy and of many newspapers concerning the moral duty of a great nation to protect the lives of its citizens. From the sinking of the *Lusitania* to the latest murders in Mexico, our weakness increases, with the cringing fear to stand up like men to defend our fellow citizens. In what other country would such a song be written as, *I Did not Raise my Boy to be a Soldier?*

The Anti-Enlistment League and similar bands of well-meaning but spineless or actually disloyal people are symptomatic of a rotten element in public opinion. See, for example, the "pledge" of this League:

> I, being over eighteen years of age, hereby pledge myself against enlistment as a volunteer for any military or naval service in international war, offensive or defensive, and against giving any approval to such enlistment on the part of others.

This notice was published in the *Advocate of Peace*, the official organ of the American Peace Society, for January, 1916. Were there any public outbursts against the cowardice and disloyalty of

this League? No. On the contrary, the pledges were circulated in our colleges and the Anti-Enlistment League now boasts of a membership of between three and four thousand.

These are all unsavory facts. But how can they be corrected unless we know them? Moreover, if one of the fundamental objects of education is character-building, is there not something radically wrong in a system of education which permits their development?

We do not like to admit this conclusion nor the facts on which it is based. But they are facts; they show that our so-called liberty in the United States too often means only license. Now one of the great objects of military education is to teach obedience to law—it makes it a creed, an obligation. What better remedy can we find for such manifestations than universal military education?

Fourth: **Is efficiency developed as it should be by our schools?** As this depends largely on good health, mental development, and strong character, what we have already seen indicates that our school system still leaves much to be desired in this direction also.

At present, however, let us remember that efficiency means a combination of the qualities already studied, plus initiative and energy. It is this

combination which enables a man to earn his living, and a woman to discharge to the best advantage those duties, domestic or social, which lie in her sphere.

(*A*) *In our present school system, scholarship is rated too high, and efficiency too low.* An indication of this is seen in the columns of almost any paper where help is advertised for. Employers want men with a "good address" and who, in commercial slang, are "hustlers." Not many business men enquire especially as to an applicant's knowledge of ancient languages, or philosophy, or psychology. The demand everywhere is for men alert to receive directions, prompt in carrying them out, obedient to the last detail, and with the persistence that means final success. And how can these rare qualities be hammered into the boy or man more thoroughly than by some form of military discipline?

But in addition to these fundamental elements of efficiency, the demand is for those who have special training in some one direction—for those who try to know one thing better than any one else knows it. That means the study of a profession or the learning of some trade.

It is far beyond the scope of this short study to consider professional schools, except to observe that we have more proportionately than any other

country, some of them with rather a low standard of excellence. Many a fine artisan is spoiled to make a poor professional man. It is equally impossible to discuss here our lack of trade schools, but attention should be called to two facts: that opportunities in America to learn trades are comparatively limited, and that service in both army and navy does afford an opportunity not only for military training, but to learn many trades useful in civil life. Let us look at this a little more carefully.

Any one who doubts the efficiency of the German system, as compared with our own lamentable lack of opportunities for young men and women to learn trades, need only turn to any authentic statement concerning this point (39) (40).

Munich, for example, in one of its palatial schools, teaches forty-two trades to nearly 6000 pupils. Where have we anything like that, except in occasional "Institutes" founded by individuals?

This lack of technical knowledge on our part has been made painfully evident by the present war. Although raw materials are abundant here, and high prices are paid for dyes, medicines, and for various products of the laboratory and workshop, our supplies are exhausted. Why? Almost wholly because *we do not know how* to manufacture

these supplies. Our trade schools are too few and too imperfect.

This unfortunate disregard of efficiency in education,—in other words, the habit of neglecting practical sciences for the sake of studies which are rather ornamental, is a fault which must be corrected by some other nations as well as America. That is shown by an announcement made on the 26th of July by the Marquis of Crewe in the House of Lords, to the effect that the government proposed to appoint a committee to review the whole field of national education. The dispatch adds:

> This announcement is the outcome of strong agitation to overhaul the education system of the nation in view of the defects revealed by the war, and with the object of meeting German competition in various fields of research in which Great Britain hitherto has been distanced. (Note I)

Now the point is, that the lack of facilities for instruction in trades can be balanced, in part, at least, in the United States by military service, because:

(*B*) *Service in the navy or in the army is itself an education.* The "slouch," whether formerly in college or not, suddenly finds that training straightens his spine, broadens his shoulders, teaches him to stand and to walk better than before.

More important still are the habits which he must acquire, which are invaluable to him as long as he lives. But the greatest gain is the widening of the young man's horizon. As he comes in contact with different types of men he learns to adjust himself to his surroundings, and increases his knowledge of what we call "human nature." His horizon is also widened by travel. The sailor has glimpses of many peoples in many climes, and the soldier learns not only different parts of the United States, but if he is in the regular army, he becomes familiar with our foreign possessions. If universal military service were adopted, it is probable that recruits for the navy would serve a portion of their time on shipboard during the winter.

Would it not be of great educational value to any farmer boy of New England to be taken from his isolated home and from the group at the country store, and transplanted to a battleship for a couple of months' practice at Guantanamo or in some other part of the tropics? Would universal military education have much "compulsion" for him?

The new bill for the reorganization of the army makes special provision for educational advantages. In fact, this is one of its few redeeming features.

The following account gives an idea of occupations in the navy (41):

Electricity is taught in all of its forms, the uses of motors, generators, batteries, dynamos; steam engineering in all of its phases up to the latest devices in turbines, the principle of explosive engines, the use of air compressors, and the use of compressed air.

The modern battleship or armored cruiser is really a floating trade school. There is a machine shop with lathes, there is a fully equipped blacksmith shop, a complete bakery, there is a carpenter shop and places for ship fitters, metal workers, plumbers and joiners. Up-to-date cooking is taught and there is a modern laundry with the latest equipment.

Many other occupations can be found on board a modern man-of-war. There are stenographers, typewriters, the storehouses, run on the principle of a department store, the profits of which go to the purchase of athletic outfits. All of this in addition to what goes to make the man-of-war's man proper.

Besides this there are various semi-professional and trade schools on land. During the past year the Fuel Oil School has been opened at the Philadelphia Navy Yards, for the use of this form of fuel is increasing rapidly both in the navy and in merchant ships.

At the Pensacola Naval Station there is an Aviation School where a new class of enlisted men is formed every three months. They are taught and exercised in the principles of flight and trained

in the mechanics of aviation. In view of the rapid strides made in this department during the last few years, men with this training may later be as much in demand as the automobile builder is today.

At the New York and San Francisco station "radio" courses are given at the schools of electricity. Then there are the special schools, such as the machinist's school at Charleston, South Carolina; the artificer's school at Norfolk; the musician's schools at Norfolk and San Francisco; and the baker's schools at Newport. These are all open to deserving enlisted men to qualify themselves in different trades.

Education is a prominent feature also of the army (42). Men who have not had opportunities for study in early life will find in the army facilities for acquiring a good education. At all posts there are schools for the instruction of enlisted men in grammar, arithmetic, geography, history, algebra, and other studies comprised in a common school course. These schools are exclusively for the benefit of enlisted men, affording facilities whereby a soldier may lay the foundation for a higher, or a technical and advanced mechanical education, which can be acquired in the special service schools. Attendance at any of these schools is optional with the soldier.

There is also a school for signal troops, where enlisted men are trained as telegraphers and in the establishment of field lines of information, field and station wireless, ballooning, and the installation of telephone systems. At many places in the United States there are stations where instruction of enlisted men for duty in the Hospital Corps is carried on. This course teaches the men how to care for the sick, to dress wounds, compound medicines, and, finally, to become skilled nurses or pharmacists.

There is furthermore practical instruction in the art of cooking and baking, under the instruction of experts.

At another school they are taught to make and repair in the most practical and expeditious manner any horse equipment or harness. At this school the students learn how to treat and care for sick horses, and are instructed in practical horseshoeing. The men here get valuable training, such as it would be difficult to obtain outside of the army.

In a word, there is no form of education which tends more to alertness, promptness, obedience, exactness, and other qualities which make up efficiency than does military training, and the lack of trade schools in the United States is supplied at least in part by instruction given in the army and navy.

CHAPTER IX

MILITARY EDUCATION—NOT TRAINING —OF ADVANTAGE TO GIRLS

FIRST: **Development of health.**

In the primary and grammar school any "setting up" exercises make straighter spines and lessens the nearsightedness of all pupils equally. Whenever medical inspection is introduced, deformities would be corrected, and protection against contagious diseases assured to girls no less than boys. In addition, girls would have impressed upon them the fact that a certain amount of outdoor life and active exercise is essential to continued good health. It is not necessary for them, however, as it is for men, to become athletes. Women are not expected to dig trenches or become Amazons any more than they are expected to sing bass.

Second: **What can women who have passed the school age do towards preparedness?** It must be confessed they are now as untrained as are the men. The knitting and bandage folding are evidences of a beautiful spirit, but as examples of efficiency in comparison with the work of a machine,

the results are pathetic. That is for the most part mere handwork. Any woman can do it. But in days of stress, the nation would require more head work. Or if some women must work with their hands, it should be in a kind of work ordinarily done by men. Therefore, if preparation is to begin now:

(*A*) *An inventory should be taken, by registration,* of the availability of women for different kinds of work, such as report says has been taken, during the present war, in England and Holland.

If that were done in this country the public would probably be surprised at the result. In the *Thirteenth Census* (vol. iv., pages 91 to 94) we find women in the United States recorded as blacksmiths, stone masons, carpenters, electricians, gunsmiths, millwrights, oilers of machines, saddle makers, tinsmiths, mail carriers, telegraph operators, doorkeepers, guards, laborers, etc.

There are also accountants, architects, engineers, interpreters, translators, and of course an army of stenographers, bookkeepers, teachers, etc.

If a card catalogue were made of these women in any city, town, or village, and the names arranged according to occupation, a preliminary step would have been taken in determining that community's readiness for service not only in time of war, but in any emergency when the

work of women must be substituted for that of men.

(*B*) *How can women be educated for efficiency* in time of war as men are trained for efficiency in the field? The answer to this is, briefly—make a practical study of domestic science with special reference to the care of invalids. And what does this mean?

It is to begin with almost menial work and pass gradually, by careful and painstaking methods, to those higher and broader activities for which women have a natural aptitude. To be more definite, it is within the range of woman's preparation to develop her capacity as a nurse; to learn how, and how not, to sweep a room; how, and how not, to dust it; how to make a bed properly, and how to change the sheets without disturbing an invalid. She should obtain some knowledge of weights and measures, of thermometers, and the simpler chemical tests. These all tend to efficiency when caring for sick or wounded, and need not wait on war to prove their usefulness.

The health of the family—certainly of any invalid in it—is often dependent on the bacteriology of the kitchen, and even a little knowledge of the bacteriology of the sick-room contributes largely to the comfort and to the rapid convalescence of its occupant.

Again, cooking for the sick is an art to be learned by practice—not from books; the nutritive value of different foods is important, especially in time of war when prices are always high. Indeed, the household commissary is always dependent on the science of dietetics and the chemistry of cooking.

In a word, any woman of even moderate intelligence can, in time of peace, prepare herself for efficient work in time of war, just as a man can by his kind of training. A course in domestic science or nursing requires rather constant work and study, with clinical and laboratory practice for three or four years, but if universal military education were established in the United States, it is probable that more girls would be ready to attend "Continuation Schools" or trade schools for these and kindred branches than at present. If their brothers and sweethearts were to be called to the colors, these girls would have ambition for something better than simply to "graduate" or to "finish." They would aspire to something more than plying their trades, if wage earners, or devoting themselves to "bridge" if unfortunately dependent on pleasures for interests in life. Night schools can furnish instruction to many a girl, and domestic science and the art of nursing could easily become the fashion.

One by-product of the larger and brighter

horizon of home and home influences might be a lessening in the number of divorces, in which the United States now leads all the western nations (4).

If we pass from domestic affairs to activities beyond the household, the field of woman's possible efficiency is equally diversified. There is a legion of societies, as we know, organized in part or entirely by women for rendering assistance in time of war. They are to support hospitals or ambulance services, or help the blind, or provide artificial limbs, assist widows or orphans, or feed the hungry—in fact, to help in any and every way.

But it is easier to organize these agencies than to make them work smoothly, and the difficulty with the women who are new to such work is the same as the difficulty with the raw recruit. Both have to learn first of all the lesson of obedience—of team play—of the absolute necessity of organization. It takes months to teach a man or woman, in any occupation, how to become simply a cog on a small wheel—itself the part of a big efficient machine. That, too, means preparation.

Even if war never came to us, the lessons learned by military education would be of undoubted value to American women. In this connection it is only possible to indicate briefly two or three of these advantages. For example:

(*a*) *The woman herself would have a more definite aim in life.* Instead of being reared, as many of them are, primarily to be attractive and secondarily to be intelligent and useful, that order would be reversed. Any such change in the attitude of mothers and of the teachers of girls would mean inevitably an intellectual and moral uplift of the women of today, and a still greater effect on those of the next generation. With tastes thus educated for the appreciation of a simpler life, the opportunities for natural and rational enjoyments would be infinitely greater than at present.

(*b*) *The family circle* would benefit by her increased efficiency as a mother, a wife, or member of the household. This is evident.

(*c*) *Her husband* especially would have greater reason to appreciate her value as a companion and co-worker. We have seen that divorce in this country is more common than in almost any other, except Japan. Its disgraceful frequency is increasing—that increase being apparently well marked in States where woman suffrage exists. (Census volume on *Marriage and Divorce*, Washington, 1909, page 16; and Senate Document 408, 64th Congress, page 12.) Whatever the cause may be, it is probable that the frequency of divorce would be somewhat lessened, if the average wife could find a greater number of intelligent inter-

ests in home life, and could also be raised to a higher plane of efficiency and refinement.

(*d*) *The nation* would be more ready to recognize woman's right to the ballot. It is quite possible that the military education of men, and of women also, after a certain method, might become a test for the right to vote. Many men are opposed to giving the vote outright to over two and a quarter million women—principally negroes or foreign-born whites who can not read or write, who apparently care little or nothing for the vote, and have done nothing to warrant any claim to it. These men do not believe either in forcing the ballot on other millions of intelligent women who object to the responsibility which that brings with it. On the other hand, many opponents of suffrage for women indiscriminately would strongly advocate some degree of education or actual service to the nation, as a qualification for the franchise for both men *and* women—proper precautions being taken not to disqualify those who are desirable citizens in spite of physical imperfections.

It would be Utopian and probably unconstitutional to provide that any such changes in the standards of citizenship should be applicable at once to a large number. It is impossible to take away the vote from those who already have it. But it would not be so difficult to grant the right of

suffrage in the future, only to those men, and women also, who by military education and service, or otherwise, first render some service to the country. In this way we could obtain a real standard of citizenship, cleaner politics, better government, and loftier ideals for the nation.

CHAPTER X

BUT WHAT IF——?

AT this point someone may say: "That is all very well. But what if so and so should happen?" Before dismissing the subject it is only fair to look at these contingencies. For example,

What if peace in Europe should come suddenly? The simple fact is, no one knows. But as naturally everyone wants to know, the result is two groups of surmises concerning the future. The first comes from people who, consciously or unconsciously, imagine they have the gift of prophecy. They do not judge the future by human experience in the past, and are quite sure that their conclusions are entirely right. They forget that prophecy was long ago defined as "a gratuitous form of error." Many of the pacifists belong to this group. A shining example among them is President David Starr Jordan, of Stanford University, the High Priest of Peace. In 1913 he wrote: "*What shall we say of the Great War of Europe, ever threatening, ever impending, and which never comes? We shall say*

that it will never come. Humanly speaking, it is impossible." And Bloch, the author of that remarkable book, *The Future of War*, which was an important factor in bringing about the first Hague Congress—this was his opinion: "*There will be no war in the future, for it has become impossible now that it is clear that war means suicide.*"

It is this class of prophets who are very sure that after this war the exhaustion of all belligerents will make universal peace a necessity. For many reasons that seems natural and reasonable.

But let us see another group of statements, which come from people who do not aspire to be prophets. They simply reason as to the future from experience in the past, and state their conclusions with caution. They point out that nations exhausted by war have risen quickly to strength and aggression. France recovered rapidly after her defeat by Germany, Greece after her conflict with Turkey, Russia after the Japanese war, Turkey after her defeat by the Balkan Alliance, and Bulgaria even after the second Balkan war. Our own country was never better prepared for war than when our veterans were still fresh from the fields of Virginia. It was then that we invited France to leave Mexico. And she left. In fact, another war now would furnish occupation for many thousands who otherwise will not know what to do or where

to go. The disbanding of millions of men is full of difficulty, unless they return home laden with indemnity. Or,

What if an international court with an international army to enforce its decrees were established after this war? That is a beautiful dream. The theory is old and has been stated in generalities many times. But no one has shown how it would or could work in practice.

For example, the central allies now, with an aggregate population of over a hundred million, can hold their own against a total population of about five times their number. And if this international court were to decide a case against the lesser number, or against them and perhaps other nations with them, and if they in turn simply said that this treaty was "a scrap of paper," then how many million men must this proposed international police contain to enforce the ruling of the court? No one in the League to Enforce Peace or at Mohonk, or anywhere else, seems to have figured out that problem.

Under any circumstances, the United States, with its population of one hundred million, would have to furnish about as many men for that international army as Germany and France together. And if we must have an army at all, then for the advantages to the nation and to the

individual, which we have already seen, why should we not have with it universal military education?

But suppose, by some miraculous change in human nature, every one of the Great Powers were to blow up their battleships, coast defenses, and boundary forts; it would still be necessary for us to maintain an army to suppress riots, to protect Federal property, and maintain order within our boundaries. Even for such purposes our minimum has been about thirty thousand mobile troops, and if the Mexicans persist in raids, as is their wont, we would need a really large force at once. And where could it come from?

Therefore, even with an International Court existing,—why not universal military education?

And while we are considering these possible contingencies let us go one step further and ask finally:

What if we are NOT prepared?

Many of our optimistic friends are closing their eyes complacently and saying: "We live far inland. Nothing can hurt us." Or if near the coast they say: "We have been safe for many years past, why not for many years to come?"

But each one may, at least, have to pay his part of an indemnity, disappointment and shame being left out of the question. The dweller near the

coast, surely on the Atlantic side, would find to his sorrow what the neglect of preparedness may mean

FIG. 11

A few of the Navy Yards, Arsenals, and Munition Factories near New York.

to him. When we recall the fact that in a contest with the German fleet ours now would be outnumbered nearly two to one, with our guns and speed also inferior, it is not probable that a naval battle

would end otherwise than in our defeat. If an opposing fleet then so desired, it could stand off Rockaway Beach and the fifteen-inch guns could throw shells into Brooklyn, or even over Brooklyn into the lower part of New York—at the outside a distance of 27,000 yards, or about 15.3 miles. The possibility of entering the harbor may be a mooted point, but an enemy could easily approach somewhere else; to oppose their eight hundred thousand veterans, we could muster possibly two hundred thousand for the first line, and, at most, four or five hundred thousand for the second line, all raw troops, without aircraft, practically without machine guns—with nothing. The outcome could not be doubtful.

The result would illustrate what General Richard Henry Lee said:

> A government is the murderer of its citizens which sends them to the field uniformed and untaught, where they are to meet men of the same age and strength, mechanized by education and disciplined for battle.

And what would be the further effect? Naturally the line of march of such an invasion would be toward New York, and there would be less to hinder their march than there was in Belgium. A

glance at the map on page 126 shows the situation. Every town there means the presence of an arsenal, a navy yard, supply depot, or munition plant. Our supply would be promptly cut off; the railroads would be blocked, the wires cut, that part of the country demoralized. Thousands of men would wish to stand their ground, to fight for their country and homes, but it would mean only more slaughter and greater loss. As for indemnity, would there be any limit? The present debt of Germany is almost incomputable. But if the Germans were once in control of New York, or even part of the territory represented on this map, we would have to pay that debt, and we might have to pay it with heavy interest besides.

This seems like a nightmare. But practically the same has happened to other countries and in recent times. Why not to the United States?

Plans for the invasion of the United States were made and published long ago. For example: Freiherr von Edelsheim, then a member of the German General Staff, published in 1901 a book entitled *Operations upon the Sea* (15). In the present condensed statement it is impossible to give even an outline of this apparently complete and well digested plan by a man eminently qualified to deal with such a subject. He shows in detail how a sufficient force could be shipped to the

United States in successive units of 240,000 men and successfully landed. As this book reveals the theories of at least a portion of the military arm of the German Government it has recently been translated into English, and will probably prove instructive to those who feel secure because of our supposed isolation.

As for the ability of an enemy to land on a hostile coast, von Edelsheim says: "Military history shows that an attempt to prevent a really bold landing is never successful." In regard to this statement General Francis Vinton Greene says (16):

> When I first read this dictum I was disposed to question its accuracy, but in looking back at the list of overseas expeditions during the last 140 years I can find no case which disproves his statement. In the days of sailing-ships, Howe landed on Long Island in 1776, Napoleon landed in Egypt in 1778, and Scott landed at Vera Cruz in 1847. In the days of steam, the English, French, and Sardinians landed in the Crimea in 1854, the troops of the United States landed on Cuba, Porto Rico, and the Philippines in 1898, the allies landed at Taku in 1900; and there have been various minor landings during the last 140 years. I do not believe that von Edelsheim's dogma can be successfully disputed.

Since this statement by General Greene, the English landed troops on the Galipoli peninsula

in the face of defenses manned by a powerful force of trained soldiers, armed with guns of the latest type. So it would not seem impossible for a superior force to land on our coast—for example, in the still waters of Long Island Sound, at some point in the hundreds of miles entirely unprotected.

But national defense means something more than ability to resist attack. It means the security which we owe to our country's future and the preservation of its ideals. If prepared, we need not fear war. Preparedness on land would enable us, like Switzerland, to reduce very greatly our standing army. That would be a permanent decrease in expenditure, which would balance, as we have seen, the cost of annual mobilization several times over. Then, being prepared if necessary for force, we could join in plans for arbitration. With our citizens ready for defense and with these men in homes which they would be loath to leave without provocation, our strength would not mean war. Then, and not till then, can we hope for a more lasting peace.

CHAPTER XI

CONCLUSION

THE object of this study, as stated in the opening paragraph, was to determine whether the two problems of education and of national defense are so related to each other that to solve one means also to solve the other. Apparently that question can now be answered in the affirmative. The solution of both problems seems to depend largely on the adoption by this country of universal military education, preferably according to the Swiss system.

That conclusion is important in itself. But the recognition of its underlying principle and its far-reaching effects would mean the most profound change in the attitude of this country which has taken place since the Civil War. For we have now reached a critical point in our history.

For nearly a century and a half our country has waxed strong materially, with a rapidity of growth which made it the envy and wonder of its neighbors. The Spanish war brought expansion to world power, and we became still larger and richer. But

since then unfortunately we have grown weaker and have developed symptoms of decay.

In our study of the relation to each other of the two problems of education and of national defense, we have discovered, one after another, indications of national weakness. Almost at the outset we saw that the United States was not only the richest nation in the world, but that the wealth was squandered largely in extravagances; that for liquor, automobiles, tobacco, jewelry and plate—for any one of these we spend more than we do for education or for national defense, and that even for chewing gum the nation spends in a year more than enough to build two battleships.

When considering how the public school system tends to injure health, directly or indirectly, we discovered suspicious evidence of a tendency to debility or feebleness in the average American; at any rate he does not seem to be now a sturdy physical specimen. We found also that his mental development is by no means as perfect as it might be; that illiteracy is much more common with us, even among the native born whites, than in either Germany or England; and that we are behind Germany in the efficiency of our schools, especially in the opportunities afforded by our trade schools.

We found that the process of character building was not satisfactory—due largely to absence of re-

straint in the schools and at home, this lack of respect for authority and of self-control showing itself in later life. The degree of indulgence in spirits places the average American among those prone to intemperance.

Domestic relations in this country are unstable as compared with other countries, and the frequency of divorce is greater by far than in any other of the western nations.

Finally, it appeared that we are the leader among nations in crime, and apparently crime is increasing among us at a greater rate than in other great nations. Let us look at this list, that we may face it with all the shame that it brings. Here are the characteristics in which our country is foremost or prominent:

Wealth
Extravagance
Physical weakness
Illiteracy
Intemperance
Divorce
Crime

This means not only blushes of shame, but it is a list of symptoms of national disease. Too long have we blinked our eyes at these unwelcome

facts, while orators and politicians have dwelt only on the wealth and material prosperity of the nation. But if the country is to realize where it is tending, then this list of dangerous national symptoms should be writ large on the mind of every legislator, clergyman, teacher, and every other thoughtful American.

We are indeed at the parting of the ways. In the history of nations we find innumerable examples of those which have struggled into existence, flourished for a time, gradually developed these same symptoms of disease, until, fattening in their wealth and self-indulgence, they became limp and rotten. It only remained for some more virile nation to give the *coup de grâce*, and then came—death.

If our country is to be "the great, greedy, sensuous America" which Matthew Arnold called it, then in this latter day struggle for existence the United States also must pass on, as other nations have, in the panorama of history. That is one road—the easy downward path. Is it to be our future? Is the time approaching when our country is to be partitioned perhaps between some power or powers on the East and another power on the West?

Fortunately, however, there are now some signs of a national awakening. This shows itself

in the quickening sense of shame at our weakness, and at our prompt submission to powers abroad, and to political pressure at home. It shows itself in the voice of the press, in the action of legislators, of educators, and especially in the steps already taken to build and maintain a larger navy. But these are not sufficient. In the ultimate analysis what we need is MEN.

We need Americans,—patriotic Americans. We need a new development, physically, mentally, and morally—the awakening of a finer and truer spirit, which leads to loyalty and higher ideals. It is that spirit which, with courage and self-sacrifice, led our fathers from Bunker Hill to Yorktown, from Bull Run to Appomattox, which won the liberty we now enjoy—but not our extravagance and license. Those men gave their lives for something better than our vices, and the spirit of this new Americanism is a "high resolve that these men shall not have lived in vain."

If, therefore, the European war reveals our weakness, extravagance, lukewarm loyalty, and other faults, then as the first step toward national defense, toward better health, higher ideals, and happier lives, we ask now, at the end as we have asked so often in the course of our study—Why, *Why*, WHY not Universal Military Education?

NOTES

(A) PAGE 11. According to the *Navy and Marine Corps List and Directory* for January, 1917, the last four battleships in the above list are now completed and in commission. These may be classed as super-dreadnoughts in size and armor, but they are one or two knots slower than corresponding English or German ships. We still have no battle cruisers.

(B) PAGE 14. The percentage of oversea commerce carried in American vessels has decreased from 90% in 1830 to about 13% in 1890, and now our ships carry hardly 10%.

(C) PAGE 16. This bill also contained a clause giving extraordinary power of appointments to the Secretary of the Navy. Concerning this clause the National Security League said: "For increasing the party patronage and 'pork,' the personnel features of the Senate naval bill are most admirable." A feature which persists, to the detriment of discipline and morale of both navy and army, is the rapid advancement of certain officers because of personal or political "pull." An example of this is the recommendation by President Wilson for the rapid promotion of his physician, Dr. Grayson. There is no record

of professional achievement nor anything else to show that the latter has distinguished himself in any way. But concerning him the *Army and Navy Journal* of Jan. 20, 1917, said: "The promotion of Dr. Grayson is equal to a promotion of about 400 numbers on the line, so far as rank and pay are concerned. . . . Admiral George Dewey, for example, received but four numbers of promotion for winning the battle of Manila Bay, and later, when by special act of Congress he was made a full admiral, a jump of six more numbers. Naval Constructor Hobson, for his bravery in sinking the *Merrimac* in Santiago Harbor, received a promotion of ten numbers in reward. Rear-Admiral Robley D. Evans, for his gallant Fort Fisher action, received only four numbers of promotion in reward." . . . . The figures in the text concerning the cost of the navy were for 1916. The bill "making appropriations for the Naval Service for the fiscal year ending June 30, 1918," provided for a total expenditure of about $518,000,000. It became a law March 4, 1917.

(D) Page 23. In the *Army and Navy Register* of Feb. 3, 1916, Secretary of War Baker is quoted as saying: "As a civilian I believed that a standing army was a menace to free institutions, and that the professional soldier desired war; but I have found as Secretary of War that the entire army of the United States, from the commanding general to the last enlisted private, does not desire war."

(E) PAGE 25. *Current Events* of Nov. 10, 1916, says: "It is estimated that 40,000 militiamen refused to take the national oath. This has practically blocked the plan for a truly national guard—one under national orders." . . . . The bill "making appropriations for the support of the army for the fiscal year ending June 30, 1918," provided, in its finally amended form, for a total expenditure of about $278,000,000. But it did not become a law. A small group of pacifists in the Senate killed this bill and others with it by filibustering. In spite of that and of the critical condition of our foreign relations, an extra session was not convened until more than a month after adjournment on March 4th.

(F) PAGE 33. The waste of public money has at last attracted public attention. The Journal of the American Institute of Architects, published at Washington, has recently tabulated some of these scandalous expenditures. See a reprint entitled *Mostly Pork*—a most enlightening document. It shows how frequently in remote hamlets of one or two thousand inhabitants, post offices have been erected costing twenty or thirty thousand dollars, and gives the names of representatives responsible for this "misappropriation"—if for euphuism it may be so called.

(G) PAGE 88. Dr. Walter E. Brown of the Pennsylvania Board of Health is quoted as saying: "Most

men and women of forty have ill health of some sort, and the 'old age diseases' have usurped the place once held by the great white plague."

In the *Proceedings of the Academy of Political Science*, 1916, page 149, George Creel says that "of the thirty million wage-earners in the United States, each loses an average of nine days a year through sickness—a wage loss of $500,000,000, not to take account of the millions spent in medical attendance and lost in the curtailment of productivity. Six hundred thousand people die annually from preventable disease, among them being 150,000 infants sent to death by ignorance and neglect.

(H) PAGE 91. A decision by General E. H. Crowder, Judge Advocate General, which appears in the *Congressional Record* of April 12, 1916, reiterates this statement in the strongest terms.

(I) PAGE 109. The General Education Board has announced from its office at 61 Broadway that it will provide Teachers College of Columbia University with the funds necessary to establish and conduct a school for the purpose of constructive work in the reorganization of elementary and secondary education.

(J) PAGE 113. The fact that military education tends to efficiency has been demonstrated. Taking the names selected from biographic dictionaries and

similar publications as a measure of what may be called "Success," it appears that of college men who succeed in civil life, we must count first graduates of West Point, then of Annapolis and Harvard, about evenly, and after them graduates of other prominent institutions. See *The Centennial of West Point*, vol. i., page 485.

America, America, where is your manhood gone?
Who taught your sons to brag and run, who taught your sons to fawn?
Who taught your sons to whine of peace with quaking coward knees?
And fling in panic to the wolves your hard-won liberties?

* * * * * * *

Arm, arm, arise, America! Heart of my land, be flame!
An end of words and barter! An end of sloth and shame!
Hark, how the old heroic ghosts to deathless deeds invite:
If you are cowards, perish! If you are men, then fight!

HERMANN HAGEDORN

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